WORKER COMPENSATION RATEMAKING REFORM

HEARING

BEFORE THE

SUBCOMMITTEE ON GENERAL OVERSIGHT

OF THE

COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES

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WORKER COMPENSATION RATEMAKING REFORM

THURSDAY, FEBRUARY 18, 1982

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON GENERAL OVERSIGHT,
COMMITTEE ON SMALL BUSINESS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:15 a.m., in room 2359-A, Rayburn House Office Building, Hon. John J. LaFalce (chairman of the subcommittee) presiding.

Mr. LAFALCE. The Subcommittee on General Oversight of the Small Business Committee will come to order.

OPENING STATEMENT OF CHAIRMAN LaFALCE

I have called this hearing to review two worker compensation insurance ratesetting practices which may be severely discriminating against our Nation's small businesses. These practices appear to be so widespread and so deep-seated that, notwithstanding recent efforts in a few States to reverse these practices, they continue to cost our Nation's business community in excess of $1 billion a year in inflated worker compensation premiums.

The two practices to which I refer are: (1) The refusal by the insurance industry to submit worker compensation rates which reflect the billions of dollars of investment income earned by these insurers annually; and (2) the steadfast resistance by worker compensation insurers to switch from the present cartel-dominated, fixed-rate system to one permitting open competitive rating.

By most accounts, worker compensation insurance, with annual premiums in excess of $20 billion, is a highly profitable line of business for the industry. In fact, profitability data from the National Association of Insurance Commissioners suggests that, on the average, this line of insurance is 50 percent more profitable than private passenger auto insurance.

Yet, despite the fact that investment income has undeniably funneled billions and billions of dollars each year into the coffers of worker compensation insurers, this veritable money machine has been studiously ignored by almost every State in its ratesetting efforts.

Only recently, a small number of State Insurance Commissioners have managed to break this tradition of regulatory myopia. The result has been a significant reduction in worker compensation rates.

For example, last spring Michael Markman, the Minnesota Commissioner of Insurance, ordered a 17-percent reduction in manual rates—the standard fixed rates most frequently applied to small businesses—following a 2-year investigation of insurer investment income. Commissioner Markman, who was originally scheduled to testify at this morning's hearing, is unable to attend today. He has, however, kindly forwarded a statement which I shall introduce into the record. I will also include in the record a copy of the Commissioner's decision of last April, which I am sure will come to be recognized as a seminal treatise in the area of investment income.

Another perspective on the investment income debate will be supplied today by the chairman of the Industrial Commission of Ohio. Ohio operates a State monopoly on worker compensation insurance which excludes the sale of this coverage by private carriers. In 1981, the Ohio worker compensation insurance fund had net earnings of $260 million from investment income. These funds were utilized to ease the premium burden of Ohio employers.

The plowing of these hundreds of millions of dollars of investment income back into the delivery system may in part explain why Ohio is able to pay back approximately 60 percent more in benefits per premium dollar than in the many States which set rates for private carriers without reference to the vast amounts of investment income earned by the insurers.

Another important area of reform to be considered today evolves from the fact that President Ford's Justice Department Task Force on Antitrust Immunities, the National Association of Insurance Commissioners, and a sizable segment of worker compensation insurers, have all called for a switch from fixed rates to open competitive rating; yet the traditional cartel-dominated, fixed-rate system continues to operate in most States.

We will hear testimony suggesting that reform of the rating practices relating to insurer investment income and competitive rating could very well result in a 15- to 20-percent reduction in worker compensation insurance premiums across the country. This type of saving would provide very substantial relief to American employers who are fighting in all too many instances for their economic lives.

Anything approaching an overall 15- to 20-percent reduction in worker compensation premiums following implementation of the reforms discussed in this hearing could have particular significance for small businesses, where worker compensation premiums are often a major overhead cost. For example, worker compensation premiums frequently account for 10 percent or more of payroll costs for smaller labor-intensive firms. In some cases, small businesses pay as much as 20 percent of their payroll costs into worker compensation premiums.

I had sincerely hoped that both sides of the investment income and competitive rating issues would be represented in these hearings. To that end, I invited Liberty Mutual, the single largest worker compensation insurer, the National Council on Compensation Insurance—which is the industry rating service—Crum & Forster Insurance Co., the American Insurance Association, and the Alliance of American Insurers.

Apparently none of these parties believed that it was in their best interst to engage in a public discussion of these issues at the congressional level. Several of these parties have responded to the invitation to testify by indicating that these ratesetting practices are the domain of the State insurance departments and are not an appropriate area of inquiry by the Congress.

Notwithstanding their refusal to participate, there is no question in my mind that it is in the public interest that the Congress be adequately informed of the status of these issues and their potential impact on the Nation's small business community. Make no mistake about it, these are complicated issues. Yet the Congress and the public must have an understanding of the basic issues and the forces involved if a nationwide reform of these discriminatory ratesetting practices is ever to be achieved.

Let me finish my remarks by noting that I do intend to request an extensive investigation by the GAO of the rate reforms discussed here today.

At this time I would like to introduce into the record, without objection, the testimony of Commissioner Markman and also the treatise that he has done in the area of investment income. Without objection, so ordered.

I also wish to include a copy of the recent landmark decision issued by Commissioner Markman. This decision will be inserted in the appendix to the hearing record.

[The prepared statement of Mr. Markman, with attachments, follows:]

PREPARED STATEMENT OF MICHAEL D. MARKMAN, COMMISSIONER OF INSURANCE, STATE OF MINNESOTA

Workers' compensation is one of themost consistently difficult and highly visibleissues in state government in many states. It is of major significance to employers both large and small. The two specific issues that are addressed here relate to whether or not the investment income earned by insurance companies while holding the funds paid by employers should be considered in the setting of rates and whether or not the competitive market is a more appropriate regulator of workers' compensation rates than insurance commissioners.

I believe that it would be most helpful to briefly describe the rate setting process in workers' compensation insurance. In most states the insurance commissioner is charged with adopting a set of rates that insurance companies are allowed to charge the employers in the state for their workers' compensation insurance. The rates are then multiplied by the pay roll of an employer to establish what is known as the standard premium charge. That standard premium is then adjusted to reflect the experience of an individual employer on past workers' compenation policies and a volume discount is also applied to the larger workers' compensation policies. The key feature is that for each employer, no matter what insurance company the employer buys his or her workers' compensation insurance from the rate and premium will be exactly the same. That system is known as the administer pricing system and has been in use with minor modifications in all states using private insurers almost since the creation of workers' compensation insurance.

In considering whether or not insurance companies should include investment income in the establishment of workers' compensation insurance rates it is first of all important to understand the insurance transaction. The insurance transaction is very simple in concept. The insurance policy holder, in this case the employer, pays a premium to the insurance company. The insurance company pays out some money in expenses and invests the remainder until required to pay out the losses covered by the insurance policy. During the period of time that the money is invested the money obviously earns interest for the insurance company. Any money left over at the end of the policy period represents the profit for the insurance company. Obviously there are only two sources of income for insurance companies, premiums and investments. In addition there are only three sources for the expenditure of those funds, expenses, losses and profits. The traditional means of establishing workers'

compensation insurance rates considers only one of the sources of income--premium income, and considers only two of the possible expenditures--the losses and the expenses. The traditional assumption has been that the investment income, whatever it may, be is for the use of the insurance companies and the profit level should be set independently of the investment income. Hence we have insurance commissioners approving rates considering only one of two sources of income and considering only two of three expenditure sources and the result is almost guaranteed to be wrong.

I believe that is critical for any insurance rating system that relies on the prior approval of the rates by an insurance commissioner to consider the investment income as a source of income for the insurance companies and to consider the profit for the insurance companies as one of the expenditures. Insurance companies are clearly entitled to profits on their business but the profit must be set as a reasonable profit in relationship to the risk that the insurance companies undertake. The fact that the insurance companies happen to operate in a regulated environment has absolutely no impact on the insurance companies entitlement to a profit that is reasonable in relationship to the risk undertaken by the companies in the transaction.

Now lets think more carefully about workers' compensation insurance. Workers' compensation insurance is thought of by in the insurance industry as a long tailed line of business. This means that the lossess that are ultimately paid from an insurance policy take place over a period of many, many years after the close of the insurance policy period. For example, an employee who is injured in a work place injury at age 18 and who lives a normal live span and is unable to ever return to work as a result of that injury may well draw workers' compensation benefits for a period of 40 to 50 years or more. Obviously, the opportunity for insurance companies to earn investment income over that period of time can be substantial. Because each states has its own workers' compensation law the benefit pay out period and the pattern at which the benefits pay out will differ significantly. However the fact that the insurance companies are holding the money for a substantial period of time continues to be true in each and every state.

We in Minnesota have recently concluded a workers' compensation rate hearing wherein we explicitly considered the impact of investment income in the insurance transaction. A few simple statistics from that rate hearing will demonstrate the significance of the work of the investment income to the insurance transaction. The expenses required to administer a workers' compensation insurance policy are approximately $.30 for each dollor of insurance premium collected. The remaining $.70 will be invested for a period of time and will earn $.36 in the investment income by the close of 15 years which is as long as we considered the pay

out pattern to run. The losses to be paid out will be $.80 this means that the losses plus the expenses are a $1.10 for each dollar of premium collected. The investment income is $.36 leaving the insurance company a profit of $.26 at the end of the 15 years. If that $.26 profit is at the end of 15 years is brought back to the present value at the assumed rate of interest earned by the insurance companies is 13% the insurance companies will earn a present value profit of $.05 for each dollar of premium written. This translates into a return on equity for the insurance companies of approximately 18%. The net result for the rates that need to be charged to the employers in order to sustain this type of insurance system is at the expected losses on the standard premium, that is, before volume discounts is about $.75 as compared to the formula of $.62 in use in most states that do not consider investment income. This difference generates a approximately 21% reduction in the rates charged by the insurance companies when investment is taken into consideration given the pay out patterns dictated by the Minnesota workers' compensation statutes.

Clearly there are critical assumptions that go into any type of workers' compensation insurance rating model. These are firstthe payout pattern for the losses. Since state legislatures have a propensity to enact changes to workers' compensation insurance laws on an almost annual basis the payout pattern is never known for any length of time and must be estimated on the basis of imperfect prior information. Second of all the amount of the investment of their own surplus that the insurance company needs to make on each dollar of written premium must be estimated, and third the return on the investment income to the insurance companies must be forcast for a significant period into the future. In addition to this, the actual level of losses must be forcast although this is not any different because investment income is taken into consideration. It is a significantly difficult problem and one that is perhaps more difficult than any of the other factors to be considered is already discussed above. Since insurance commissioners are no more blessed than the rest of the population with clairvoyance and since the assumptions that must be made in the rate making process are so critical, I believe that setting rates by this prior approval method is certainly the least desirable means of setting workers' compensation rates. If one uses the prior approval method than one must necessarily consider investment income, but if one does not utilize the prior approval method then a more efficient and more accurate means of establishing premiums rates the rates to be charged exists. That more accurate method is the competitive market place.

Attached hereto is prefiled testimony of Mr. Donald Kramer, President of Kramer Capital Consultants, in the recently completed workers' compensation rate hearing in Minnesota. The testimony deals extensively with investment income. Also, attached is a copy of a prepared statement of the author on competitive rating of workers' Compensation insurance.

COMPETITIVE RATING FOR WORKERS' COMPENSATION INSURANCE

Michael D. Markman
Commissioner of Insurance
State of Minnesota

In May, 1980 the Advisory Committee on Competitive Rating made a report to the National Association of Insurance Commissioners which enthusiastically supported competitive rating for the property/casualty insurance business. The Advisory Committee concluded that price competition is the most effective way to assure the availability of property/casualty insurance at costs that are fair, reasonable and not excessive. For a few lines of insurance, however, the committee recommended prior filing of rates permitting more regulatory review. Workers' compensation was one of these lines. The NAIC adopted a model law at its December 1980 meeting which established the concept that workers' compensation rates should be set in a competitive market.

It is the premise of this paper that the rigid regulation of premium rates in workers' compensation insurance is no longer appropriate, that it increases the cost of workers' compensation for many employers and encourages rates for the individual insurer and insured that are often inadequate, excessive or unfairly discriminatory. The rate setting process for workers' compensation should be deregulated in order to promote price competition and provide rates which are responsive to competitive market conditions.

ADMINISTERED PRICING OF WORKERS' COMPENSATION

Under the current system of administered pricing of workers' compensation rates, a single rate schedule is established by the Insurance Commissioner or other regulatory authority. The Commissioner must set this schedule of rates for the entire market, representative of the average business. These rates cannot be set in consideration of a particular market's or a company's specific circumstances. This single rate schedule must be used by all companies providing workers' compensation insurance.

A major rate request requires extensive preparation and therefore results in a significant time lag for insurance companies. Delays in the regulatory process can cost substantial sums of money while the old rates are still in effect. Energy and expense is focused on a process with a very uncertain outcome, and rates may be obsolete by the time they are put into effect. The companies are unable to

respond quickly to market changes or changes in the company's operating environment, since they often cannot deviate from the current rate schedule.

In addition, insurers are required to use a single, uniform classification system which is developed by the rating bureaus, for determining premiums. Insurers may not collapse or otherwise modify this complex system of over 600 occupational classifications.

The employer, who is required by law to purchase workers' compensation insurance, receives the same quote for the cost of insurance from all companies. There is little or no opportunity to shop around for the best possible premium. Because insurers cannot vary rates, the employer may be affected by other kinds of competition such as strict underwriting or dividend plans. Much of the risk of workers' compensation insurance is thus borne by the employer who may experience excessive costs and uncertain dividends, or may be forced into the assigned risk plan.

HISTORICAL PERSPECTIVE

Prior to the passage of workers' compensation laws in the early to mid-1900's, employees assumed the risk of injury and disability almost exclusively. Only if the employee could prove negligence on the part of the employer or possibly another employee or other third party in a court of law could the employee expect to gain any compensation for work related injury. Even then, payment was delayed and often inadequate. The burden of proof was placed almost exclusively on the employee, who experienced long delays and incurred high costs in order to receive compensation. As alternative concepts of compensating workers for job related injuries began to develop, more and more responsibility was delegated to the employer, for whom occupational injury and disease were seen as a built-in cost of doing business. Injured employees were to receive prompt and certain benefits, assisted in maintaining their standard of living and provided an incentive to return to work.

Employers were made responsible for all occupational injuries regardless of fault. In exchange for these certain benefits, workers' compensation became the exclusive remedy for employees, and injured employees lost the right to seek higher liability awards than the compensation benefits allowed. Workers' compensation laws stressed that benefits should be adequate, equitable, prompt, and certain. Employers, therefore, were required to demonstrate that they were able to pay benefits under workers' compensation law. Most laws allowed employers to meet the requirement, either by insuring with private companies or by self-insuring, if the employer could demonstrate a sound financial condition. The activities of the insurers were regulated to assure that an injured worker was paid when disabled.

To ensure the security of these benefits to employees, states passed laws regulating the insurers of workers' compensation. The concern of the legislatures at that time was that workers' compensation rates were too low. Workers' compensation insurance was a new field in which insurers had little expertise and lacked sophistication in developing a rating structure. Overconfident underwriting might not be discovered until there was a catastrophic loss or loss frequency was found to be much greater than expected. Certain and swift benefits depended on the solvency of the insuring companies. Rates were regulated, therefore, to make sure that premiums were sufficient to guarantee that insurance companies would not engage in predatory pricing, thus driving rates down to the point where they would be inadequate. There was a collateral concern that insurance companies would charge reduced rates for other lines of insurance in order to write the workers' compensation business, but threaten their own solvency as a result of overall rates which were too low. Thus, there are laws prohibiting insurance companies from charging a rate for other types of insurance which is less than they would normally charge in order to write the workers' compensation business.

The concern over adequacy of rates is now outdated. Insurance companies are larger and more sophisticated than they used to be. Insurers are also more diversified. Thus, they are less likely to have any threat to solvency because of their activity in workers' compensation. In fact, almost no companies write enough workers' compensation such that it would be possible to have an insolvency develop as a result of rates the company would charge for workers' compensation without other serious management problems. There are also better regulatory means for ensuring the solvency of insurance companies. The financial condition of insurers can be monitored directly through better quality examinations, review of CPA statements, and access to more and better financial information.

Neither is there any longer a concern for the payment of injured workers, because if a company were to become insolvent, some other mechanism would pay benefits to the injured worker. Insurance guaranty funds or other similar entities assess all licensed companies to generate the money to pay all claims. Therefore, if an insurance company becomes insolvent, the injured worker will still be paid. Such mechanisms were not in existence when the original rating laws were drafted. As laws have changed and benefits improved, regulatory concern has focused on increasing costs and assertions that rates are too high. This same regulatory system, established to ensure adequate rates, is now being used to prevent excessive rates, a transition which is problematic at best and probably inappropriate.

THE RATIONALE FOR LIMITING COMPETITION IN WORKERS' COMPENSATION INSURANCE

The NAIC Advisory Committee on Competitive Rating, although generally in support of competitive rating in property/casualty insurance, concluded that workers' compensation should be treated differently from the competitive rating section of the model competitive rating law.

There is no full competitive workers' compensation law in any state. Six states have exclusive state funds, 15 regulate workers' compensation with special statutes which are generally more rigid than other rating laws, while the other states have some form of prior approval. There is no experience to indicate how workers' compensation would perform under price competition.

There is concern that competitive rating would erode the data base on which classification rates are based. The erosion of the data base and the accuracy and equity in allocating costs are critical issues. The degree of refinement necessary to develop and maintain the classification rating system depends upon a broad and uniform base of statistical experience. This data is presently maintained by rate service organizations, who also prepare classification rates for member companies. There are more than 600 classifications in workers' compensation insurance and no single insurer has sufficient experience to develop a classification system. If each insurer were to establish its own classification and rating system, the results and statistics would no longer be valid. The data base may also be important to the maintenance of the experience rating program, which is alleged to be a financial incentive for employers to improve work place safety and to reduce accidents.

Opponents of competitive rating also allege that insurers may concentrate on selecting more desirable risks, especially the larger more stable risks while the costs for smaller risks could rise dramatically. More selectivity could result in pressure for state funds and expansion of assigned risk plans. Also, if competitive rating bars or restricts the development of rates by rate service organizations, small companies may suffer. Because of the lack of any experience with competitive rating in workers' compensation and its long history of rigid regulation, the transition period will be difficult.

THE CASE FOR COMPETITIVE RATING IN WORKERS' COMPENSATION

The ultimate objective of regulation is to create an environment where workers' compensation price levels are at the level which market forces would establish. A shift in

prices would be anticipated to result from legislation which removes the burden of setting rates from the regulator. The responsibility for determination of proper premiums, distributed equitably and fairly and assuring availability, will shift from the Insurance Commissioner to forces of competition from the market place. Every company would charge the price they believe is correct and let the competitive market place establish the rates rather than have the Commissioner of Insurance set a single rate schedule after a hearing.

Why the Current Administered Pricing System is Inappropriate.

1. Individual companies are treated as though they were one large company. Each of these individual companies makes decisions itself about how it will go about writing workers' compensation. The one decision the company does not make is how much to charge. However, one part of the insurance transaction that is not controlled is the underwriting decisions that the insurance company makes to determine what employers they will provide with insurance. These underwriting decisions are at least as important in the performance of the company over the long term as the premiums they ultimately charge. No matter what the Commissioner decides with respect to rate level, the overall performance a company experiences is not controlled; the insurers simply change their underwriting practices to reflect their perception of rate adequacy in the several classifications.

   Table I gives some indication of how the experience of insurers may vary from company to company. The table shows the pure loss ratios (investment income and expenses are excluded) of selected insurance companies for their Minnesota workers' compensation insurance. Over the period 1971 to 1979, the companies experienced an average loss ratio of 66.6%, although the individual loss ratios ranged from 46.6% to 83.5%. All these companies wrote at the exact same rate, yet they show significant variation of profitability as measured by their loss ratios.

   Table II shows the minimum and maximum loss ratios experienced by individual policyholders in each year 1971 to 1979. During the nine-year period one company wrote at a 31.4% loss ratio while another company wrote at a loss of 141.2%. Even in the years 1977, 1978, and 1979, when there was concern in the insurance industry in Minnesota that rates were inadequate, there were companies making sizeable profits. On the other hand, some companies were experiencing significant losses.

Factors other than the rate schedule obviously play an important role in an individual company's profitability.

2. Companies are forced to compete on the basis of risk selection. When a single rate schedule is set, competition can occur only at the underwriting and marketing levels. Competition solely by underwriting is discriminatory, unfavorable and increases the size of the assigned risk plan. Insurers who cannot operate profitably at the established rate attempt to be more selective. A strict underwriting posture necessarily results in growth of the residual market. This is not the kind of competition that one wants to foster from a public policy perspective. Companies that are the most stringent in their underwriting are rewarded by the system. Those that send employers to the assigned risk plan have generally better financial performance. Those that try to be responsible and write a larger business in the voluntary market are penalized by lower profitability.

3. The present system of rate setting provides no incentive for innovation. A cartel is a combination of independent business organizations that acts to regulate production, pricing and marketing. Workers' compensation regulation forces insurers into a mode which many believe constitutes a cartel. The present system insures rates or prices are set at levels higher than those needed by many insurers and there is no incentive to deviate. There is also a built-in shelter for inefficient companies, while withholding from the public, the savings of more efficient companies. And as long as some portion of insurers are experiencing losses, the primary pressure in the system is to move rates upwards, so all rates rise, with no incentive for those operating profitably to control their rates. The system generally discourages rate reductions due to inability of insurers to plan and change rates as necessary.

4. Companies may write other kinds of commercial business in such a way as to make up for perceived deficiency or redundancy in the workers' compensation rates. A study of by line by state profitability reports from the National Association of Insurance Commissioners allows one to look at the profitability of each line of business. The states that have higher profitability for workers' compensation generally have lower profitability for the other commercial lines of insurance and states that have low profitability for workers' compensation tend to have higher profitability for commercial auto, commercial multiple peril, etc. This is another aspect of a system that cannot be controlled by the current rate setting process.

5. Employers are forced to buy workers' compensation insurance without the opportunity to shop for the best price. Since every insurer charges the same rate, it is often impossible for an employer to get a lower premium quote from any insurer. This inability to compare prices and attempt to get a better rate elsewhere creates substantial frustration and animosity toward the insurance system and towards the state which requires the purchase of workers' compensation insurance. A change to competive rating would at least allow the employer to search the market for a better price. The employer is also frustrated by the fact that no matter what may be done to improve the safety of a business, the first year the employer receives no rate credit from his or her improved safety record, and in the second and third year the employer receives less than the full benefits from the experience rating plan.

The Beneficial Effects of a Competitive Rating Approach to Workers' Compensation Insurance

1. A competitive approach would allow for more focused and effective regulation. Considerable time is spent by regulators and insurers in the establishment of an overall rate level. This is conceptually the easiest part of the insurance system. The areas of unfair discrimination and law valuations, to name two examples, are seldom penetrated because the time and energy of regulators is directed to the overall pricing problem. Competitive rating would place the pricing decision with insurers and focus regulatory efforts on the areas where it is most needed.

2. Competitive rating would result in greater price variety, responsiveness and improved planning. Putting responsibility for pricing the insurance product where it belongs, ie., on the insurers, assures that greater variety in price will emerge due to competition. While the assertion is sometimes made that all prices would go up if competition were allowed to regulate, this is clearly not the case. There are a few insurers who have

deviated downward from approved rate levels in most states where deviations are allowed. There would be more if the proper incentive were provided. It is, however, clear that the rates charged by some insurers would increase. In many respects, this would not be a negative development. Capacity can certainly be expected to increase, thus reducing the size of the residual market. Also, some employers with particularly unfavorable loss experience are currently paying too little.

There is a danger that certain companies will not continue to offer coverage if rates are inadequate for their operation. By allowing individual insurers to set their own rates, competition is thrust centerstage. Some insurers may find that they should not be in the workers' compensation business; however, prices will more closely reflect the costs of individual insurers.

The current rate regulation system may also serve only to postpone the inevitable in that if a substantial segment of insurers cannot operate profitably under regulated rate levels, that level must be eventually increased. Planning plays an important role in the operations of insurers and other businesses. Anti-cartel regulation would allow a smoother pricing system to operate, one without the substantial shock of the current system wherein insurers and insureds cannot be certain of when or how much rate levels will change.

3. A competitive rating approach will encourage innovation in the pricing of workers' compensation. The current system of setting rates has virtually halted any kind of innovation in pricing. Other than the emergence of premium discount, retrospective rating, and cash flow plans for large employers, no pricing innovations have occurred in over forty years. Workers' compensation is the least innovative of any line of the insurance business. The only innovations which have come into the workers' compensation system are the result of individual employers having the opportunity to be self-insured. As a result of competition from self insurance some innovations occur in the insurance market but that is the only segment where one sees innovation. In fact, when innovation does occur, it comes about for all insurers all at the same time and in the same way. And finally, it is only important to big business because they are big. Small business does not have the kind of market power they need in order to force an insurer to propose innovations at the rating bureau. Consequently, the basis on which workers' compensation

business is written never changes, with the exception of the changes that are the result of competition from self insurance.

4. Competitive rating would improve individual insurers understanding of workers' compensation. Insurance companies currently are very dependent upon the rating bureaus and, therefore, don't adequately invest resources in their workers' compensation business. It is not profitable for them to do so. There is no incentive to put staff in the workers' compensation line since the company uses the rating bureau anyway. With competive rating, insurance companies would have to make their own decisions regarding workers' compensation insurance. As a result, the insurance industry will improve their understanding of the workers' compensation business. Presently, insurance companies probably understand less about worker's' compensation than about any other line of their business that they write. This is true from top management on down. They don't understand it well enough, because the rating bureau does all the work for them. There is no adequate return for a company who invests in specialists in workers' compensation.

5. Competitive rating would make positive changes in the role of the workers' compensation rating bureaus. The current regulatory system has generated animosity toward the workers' compensation rating bureaus which are responsible for proposing workers' compensation rate increases. Competitve rating would reduce their role to a data collection facility and service-type organization. Membership restraints would be abolished. The rating bureaus would perform more limited rate-making activities and would collect loss information only. All insurers would be required to report certain loss data to the organization to maintain a standard data base for workers'compensation. Under competitive rating the prohibited and permitted activity of these organizations will be clearly defined and merit rating schemes encouraged.

6. Competitive rating should change and improve the workers' compensation insurance classification system. Maximum price competition and differentiation can occur only if insurers are allowed to develop their own classification plans. Risk assignment to a class should be based on objective and written standards with assignment made by the insurers. The present system has over 600 classes most of which simply cannot be credible. It is improbable that prices could be established with the sort of accuracy implied by rates which differ by

pennies. Suggesting that such fine rate distinctions are impossible in workers' compensation may encourage more manageable and credible classifications. Individual insurers will have an incentive to explore new classification systems and appropriate regulation which can assure that the systems do not violate the principles of sound public policy. An outgrowth of an improved class system is more equitable pricing between risks.

7. Competitive rating would eliminate the rate hearing process. The workers' compensation rate hearing process is often lengthy, politically charged, expensive, and personnel inefficient. Competitive rating places the pricing burden on insurance companies where it belongs and can be well done.

CONCLUSION

As with any significant change there will be strong resistance to the proposal for competitive rating in insurance compensation.

A proposal for deregulation may be viewed as an attempt to allow the insurance industry to charge even more money than they do currently. For persons who refuse to accept the operation of a competitive market, this may be viewed as a strong argument, especially if they see the regulation as effectively holding down prices and thereby protecting the employers.

When competitive rating is actually implemented some employers rates will go up, to the extent that rates are viewed by the insurance industry to be inadequate. This could result in significant increases in workers' compensation rates for some employers. This would be especially true if the rate increases granted by the Insurance Commissioner prior to the change to competitive rates were substantially less than was justified. It would take some time for the market to adjust to the competitive situation.

Many workers' compensation insurers are protective of the current system and will fight to avoid any changes. On the other hand, insurance companies with smaller market shares may recognize the potential profits and want to expand their market share. They may now find it difficult because of regulatory and legal impediments.

The serious study of workers' compensation competitive rating is only about a year old. Some may feel competitive rating for workers' compensation is premature and will cause insurmountable problems. The National Association of Insurance Commissioners is continuing their study of the issue and should provide a basic framework for implementation.

A delayed implementation of competitive rating with some short run controls during the phase in process must be considered. It is now time to consider how to get the insurance industry to think about the business of workers' compensation, to set their own rates and to make competition a more effective factor in the workers' compensation marketplace.

Table 1
Pure Loss Ratio Experience of Minnesota Workers' Compensation Insurance
for the years 1971-79 valued as of 12/31/79*
Six of County Largest Groups

Company	mean**	standard deviation	range	minimum	maximum
Medical Mutual Co.	45.6	10.6	34.9	33.3(1972)	57.3(1971)
Western-National Group	51.9	12.8	38.2	31.4(1975)	69.6(1972)
Liberty Mutual Group	59.9	9.3	23.9	49.6(1971)	73.5(1979)
Home Insurance Group	64.2	13.8	37.2	38.4(1979)	75.6(1973)
St. Paul Group	72.3	23.6	84.6	42.9(1972)	141.2(1975)
Employers Mutual	80.4	18.6	28.8	55.8(1972)	93.8(1977)

Six Company 1971-79 Range of Experience Percentages (low, high)*

	mean	deviation	range	minimum	maximum
1971-79 total	45.6, 91.5	9.3, 35.1	23.9, 84.6	31.4, 55.8	69.6, 141.2

* Data taken from I-97 Form filed with Minnesota Insurance Division
** Averages are not weighted

Table II
Individual Policy Year Data*
Six of Twenty Largest Groups

	pure loss ratio	range	mean**	standard deviation
1971	51.3, 82.8	31.6	65.2	14.1
1972	33.3, 74.0	40.7	54.2	14.6
1973	40.1, 89.1	49.0	63.5	15.7
1974	43.3, 86.5	43.2	60.3	14.4
1975	31.4, 89.1	57.7	56.8	19.6
1976	46.2, 141.2	95.0	79.8	31.9
1977	41.0, 131.6	90.6	70.3	32.0
1978	41.3, 133.5	92.5	65.2	33.3
1979	35.4, 76.5	38.1	52.5	12.9

* Data taken from 1-57 form filed with Minnesota Insurance Division

** Averages are not weighted

Mr. LAFALCE. I wonder if Mr. Weber has any statements he would like to make.

Mr. WEBER. Well, Mr. Chairman, you mentioned my own State of Ohio and the workers compensation monopoly that is operated by the State of Ohio. I might just add that, in addition to the good things that you had to say about that system we have operating in Ohio, which is a State-operated fund, the voters of Ohio in the November 1981 election also had a chance to express a referendum of their attitudes on that and by a 4 to 1 margin the Ohio workers compensation system was ratified, instead of opting to the system which would permit the private insurers. The people of Ohio seem to be well satisfied as expressed in that November election with the system we have operating there.

Mr. LAFALCE. Thank you very much.

At this time I would also like to introduce into the record a statement from the National Association of Independent Insurers prepared for this hearing—they were unable to personally appear—which basically speaks in favor of competitive open rating. Without objection, so ordered.

[The prepared statement of NAII follows:]

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF INDEPENDENT INSURERS

The National Association of Independent Insurers (NAII) is a property/casualty insurance trade association with more than 500 member companies.

The NAII supports competitive rating for workers' compensation insurance under a state regulated system. At the same time, we support the preservation of the data base for workers' compensation experience. None of this requires any federal legislation or any change in the McCarran Act.

In many states, the rates for workers' compensation insurance have traditionally been subject to more restrictive regulation than other property and liability lines. In the majority of states, insurers belong to the National Council on Compensation Insurance or a similar rating organization which collects data from its member insurers, analyzes it, and periodically develops rates for rate filings where appropriate. Those rates are generally subject to the approval of that state's Insurance Department before they can be used.

Every insurer in a particular state must use rates that have been approved by the state Insurance Department. This means that most workers' compensation insurance in the state is written according to a single set of rates, even though companies deviate in some instances. Hence an employer shopping for workers' compensation coverage is limited to one pricing system. Insurers may compete for the employer's business, but generally they do not offer a lower up-front price. Instead, in most instances, competition is achieved by the return of excess premiums to policyholders through retrospective and dividend plans and by service offered by competing insurers.

Employers, insurers and commissioners of insurance have become increasingly critical of the existing "prior approval" system. The National Association of Insurance Commissioners has recommended that competitive rating be permitted for workers' compensation on a phased-in basis. In the states of Minnesota, Oregon and Michigan, laws have been enacted which provide competitive rating for workers' compensation insurance. Competitive rating proposals are now before the legislatures of several states, including Illinois, Kentucky, Arizona, Wisconsin, and Georgia.

Simply stated, competitive rating means that insurers are free to set rates based on their own perceptions of loss costs and their own experience, without the requirement of prior approval of rates and without the requirement of adherence to the rates developed by a rating organization. Each insurer is allowed to set prices that reflect market conditions. Under a competitive rating system, market forces are the fundamental regulators of insurance rates.

Competitive rating for workers' compensation insurance has clear advantages over the present prior approval system. A competitively oriented system would:

(1) Do a better job of establishing prices at a level that is satisfactory to both insurers and employers.

(2) Respond faster to changes in underlying costs.

(3) Not be subject to political decision-making by regulators with the consequent distortion of results and dislocation of markets.

(4) Cause insurers to improve in efficiency, thereby making for a healthier and stronger industry, which would in turn better serve its customers.

(5) Cause safety, claim, audit, rehabilitation and underwriting services to become more effective and efficient.

(6) Reduce insurers' motivation to rely on rates generated by rate service organizations.

(7) Cause insurers to be more flexible and more adaptive to the needs of individual employers.

Allowing workers' compensation rates to be established by a competitive market should not mean the abandonment of state regulatory authority. A competitive rating law should contain standards requiring that rates not be excessive, inadequate or unfairly discriminatory. Furthermore, the state Insurance Department should retain the authority to order the discontinuance of any rate which does not comply with the statutory requirements.

Neither does a competitive rating law have to mean the destruction of the data base for workers' compensation experience. A competitive rating law should recognize the value of a comprehensive statistical base and its availability for the use of all workers' compensation insurers. The law should continue to require insurers to report their statistics according to a uniform statistical plan.

During the debate over competitive rating for workers' compensation insurance, the opponents of competitive rating have made several arguments against competitive rating. We will briefly respond to some of these arguments.

One argument against competitive rating is that strict prior approval of workers' compensation rates is a necessary prerequisite to the continued solvency of workers' compensation insurers. This argument may have had some validity 65 years ago. Today, however, workers' compensation insurance is not written by exclusive workers' compensation insurers. With some exceptions, the leading writers of this coverage are multi-line insurers and workers' compensation is not more than 25 percent of their total volume. Competition has worked for other lines of insurance and we see no reason why it won't work for workers' compensation.

Another argument that has been made against competitive rating is that workers' compensation is a mandated social insurance program. The fact that workers' compensation is required to be purchased does not make it unique. The law often requires certain types of insurance to be purchased, such as automobile insurance and liability insurance for common carriers. Furthermore, the fact that workers' compensation benefits are mandated by statute probably makes workers' compensation a more homogeneous product than any other line of insurance. Most economists agree that a homogeneous product is an essential component of a price competitive system. This leaves insurers free to compete on the basis of efficiency, profit and loss control.

A third argument against competitive rating is that rates are now filed under a uniform nationwide classification system which is necessary for loss control efforts and accurate assessments of costs. In answer to this argument, it should be pointed out that competitive rating does not necessarily have to lead to the destruction of the classification system. It should also be noted that many experts have questioned whether all of the classes are essential. Some of the classifications are obsolete and others are redundant. A more competitive system would inject a greater degree of scrutiny and credibility to the overall classification process.

Another argument that has been made against competitive rating is the notion that because price competition is now inhibited, insurers increase their concentration on loss prevention, rehabilitation and claims service. It is true that insurers do concentrate on these areas of service. No insurer, however, will indulge in, and no sensible employer will request, services beyond those which are justifiable in their own right from a cost benefit point of view. This principle is just as true in a competitive rating system as it is in a prior approval system.

A final argument against competitive rating is that there is a need to preserve the industry-wide data base. It should be emphasized that support for competitive rating does not preclude support for the preservation of the workers' compensation data base. NAII's position in support of competitive rating for workers' compensation envisions the preservation of the data base and the retention of statistical gathering bodies such as the National Council on Compensation Insurance.

The problem is not with the gathering and publishing of statistics, but rather with the unwarranted reliance upon those statistics that insurers have become accustomed to. In a price competitive environment, far more judgment and skill would have to be exercised by individual insurers in determining their prices. To place more direct reliance upon the individual judgments of individual insurers would greatly enhance the efficiency of the industry in properly allocating resources and costs.

In summary, the health of the workers' compensation insurance system demands a more responsive approach, a less rigid structure, a less political scenario, and a more innovative direction. A competitive rating law that retains a necessary degree of state regulation and preserves the workers' compensation data base meets this demand. All of this can be accomplished under state insurance regulation and without any change in the McCarran Act.

One final cautionary note should be stressed. Competitive rating is not a panacea to all workers' compensation problems. Competitive rating does not guarantee that the premiums will go down or even that they will not rise above their present level. Competitive rating does, we contend, represent a better pricing system for purchasers of workers' compensation insurance and for all affected by the program. This is accomplished by "market forces" which set the price of the product as is the case in nearly every other line of property and casualty insurance.

Mr. LAFALCE. Now I would like to call upon our first witness, Mr. Robert Hunter, director of the National Insurance Consumer Organization.

TESTIMONY OF ROBERT HUNTER, PRESIDENT, NATIONAL INSURANCE CONSUMER ORGANIZATION

Mr. HUNTER. Good morning, Mr. Chairman, Mr. Weber.

It is my pleasure to be here today at your request, Mr. Chairman. I would appreciate it if my full remarks could go in the record and then I would just try to be brief.

Mr. LAFALCE. Without objection, so ordered.

Mr. HUNTER. The National Insurance Consumer Organization has reviewed workers compensation ratemaking practices and concludes that two practices are unfair to ratepayers generally and to small businesses specifically. These are the handling of investment income and the off balance in the experience rating plans. If they were corrected, small businesses would pay about 15 to 20 percent less for workers compensation insurance in most States.

Most State rates are established by a cartel called the National Council on Compensation Insurance. Adherence to these rates is required of all insurers, except self-insurers, in many States—although 14 States do allow deviations.

Competition takes the form of nonprice competition such as engineering loss prevention services—although this is not usually true for small businesses—or in dividends, which are regulated in some States, package selling such as lowering auto premiums for larger risks to relieve workers compensation rigidity, and self insurance.

In 6 States there are monopolistic State funds which write all of the workers compensation insurance, including Ohio, and in 13 States there are competitive State funds which compete with private insurers.

Mr. Chairman, I suggest it might be of interest for your committee to study the efficiency of the major workers compensation insurance delivery systems. I am confident you will find that the most efficient system is the monopolistic State fund, the least efficient the private insurers. The reasons why and the importance of this phenomenon as respects small business would be an important

contribution to understanding the workers compensation delivery mechanisms generally.

Such a study was called for by the Department of Labor, Department of Commerce, Department of HEW, and the Department of Housing and Urban Development in May 1974 in a white paper on workers compensation, but it never occurred.

Inefficiency of delivery of workers compensation insurance adversely impacts large as well as small purchasers of insurance—although the small cannot self-insure as readily. I propose that the committee consider risk retention groups for workers compensation insurance similar to those Congress allowed for product liability insurance. Critical to grouping of small businesses, and consequent significant cost savings, is the striking down of anticompetitive State laws prohibiting people getting together to form such groups. The product liability did just that for product liability but not for workers compensation. Why not workers compensation? Why not auto insurance, for that matter?

Regarding ratemaking, Prof. Raymond Hill of Princeton University and I recently submitted a draft report to the U.S. Department of Labor entitled "Workers Compensation Insurance Ratemaking: Regulation of Profit Margins and Investment Income." The staff has a copy for the committee's use. A final report with technical corrections will be available very shortly.

We concluded that the traditional operating profit margin used by the National Council in ratemaking is entirely arbitrary because it ignores overall insurer profitability and the contribution of investment income to overall profits and that the traditional margin is significantly higher than underwriting margins suggested by methods that take investment income into account.

We concluded that our research indicates that a negative 10-percent margin, such as that put in Minnesota by Commissioner Markman, currently was much nearer the proper competitive level than is the traditional positive 2½ percent margin. In a nutshell, this is an impact on manual rates of about 15 percent.

Our study comports with findings such as those in Arizona and Minnesota studies undertaken last year. The cartel disagrees with our conclusions, maintaining that competition somehow returns any excess profits to the insureds. We disagree with this response. But even if they are correct, the question would remain: How does the small business, which pays manual rates, obtain any such benefit? They don't! Investment income, if it is partially returned to consumers, is not returned to small businesses.

The National Association of Insurance Commissioners has been aware of the investment income issue in workers compensation for many years, as you pointed out in your statement, but only now are the States beginning to really dig into the issue. I particularly congratulate Commissioner Markman of Minnesota for his brilliant order that is now in the record. I think it is the state-of-the-art in workers compensation insurance ratemaking.

Regarding experience rating plan off balances, my statement points out that current ratemaking in use in many States requires small manual ratepayers to either foot the bill or obtain a benefit from a side game, experience rating, in which they don't participate. The side game of experience rating is played by the big risks,

the big businesses, and if the side game produces a shortfall of dollars, it is built back into the manual rate and the small businesses end up paying for the shortfall of dollars.

I think this is unfairly discriminatory. You will be happy to know, Mr. Chairman, that in New York State this practice has been eliminated for many years, but in most States it continues.

Regarding that problem and the investment income problem, I attached to my statement copies of 1973 correspondence between the task force on workers compensation insurance ratemaking of the National Association of Insurance Commissioners and the industry. I think you will find that most enlightening with respect to both of these issues.

Finally, your letter of invitation asked if workers compensation rates established under open competition would be in the public interest. I have been reluctant in personal lines, such as auto insurance and homeowners insurance, to unequivocably endorse competition as a rate regulator, particularly because of severe consumer information problems and the problem of untrammeled selection rights that insurers have to reject risks with or without cause, many risks being required to buy coverage under State law or lender requirement.

Workers compensation buyers, however, are much more sophisticated, and the problem of information is therefore much less acute. Whether insurer selection rights should be limited in workers compensation for small businesses, a coverage required for almost all States, presents an interesting regulatory and legal issue. In Michigan, the supreme court found that due process rights of persons required by the State to buy auto insurance were violated when insurers rejected them. This theory presumably holds in workers compensation. It is worthy of study, I think, in the workers compensation insurance context.

Studies undertaken by the States of Arizona, Minnesota, Illinois, by the NAIC, by Dr. Hill and myself, all suggest a greater reliance on open competition in ratesetting in workers compensation is appropriate.

President Ford's Justice Department Task Force on Antitrust Immunities agreed. In its report "The Pricing and Marketing of Insurance," issued in January 1977, it concluded:

> * * * Workers compensation appears to be one line of property-liability insurance which is perhaps most conducive to total state deregulation and full exposure to market controls; there is relatively greater predictability and stability in the industry, the buyers of the service are generally informed, there is potential for vigorous price competition, and there are economic incentives to employ loss controls.

The task group's report politely alludes to the fact that resistance to opening workers compensation insurance to the full forces of competition are, as they put it, "a political rather than an economic or social decision." Indeed, the political clout which has held the system from competition particularly comes from the mutuals. As the report notes, "Stock companies sought State-by-State approval of plans which would have permitted intensified upfront price competition. These efforts, which were strenuously resisted by the mutuals at administrative hearings and through the courts, met with minimal acceptance under State laws."

In other words, when you're winning the ballgame, you don't want the ground rules changed. The mutuals do very well in writing workers comp and have a larger share of the market than in some of the other lines of insurance.

This poses an interesting question: Why would mutual insurers resist change that would likely benefit their owners, the policyholders? Andrew Tobias in his new book, "The Invisible Bankers," may have hit on the answer, and I quote him: "The managements of mutual companies are in a very real sense responsible to no one but themselves." This was confirmed in testimony before Senator Metzenbaum, which I quote in my statement.

The National Commission for the Review of Antitrust Laws and Procedures also recommended repeal of the broad antitrust immunity of McCarran-Ferguson. It did not suggest any exception for workers compensation.

Mr. Chairman, I urge this subcommittee to initiate a General Accounting Office study of the anticompetitive aspects of the regulatory delegation Congress made to the States in 1945 under the McCarran-Ferguson Act to determine if legislative standards for such regulation should be introduced in order to generally improve competition in insurance. As part of that study, I suggest specific research into ways to assure small businesses have access to essential workers compensation insurance at affordable prices. You should also ask GAO to review the State antirebate laws, fictitious group laws, cartelized ratemaking, and other anticompetitive actions allowed under the McCarran-Ferguson Act today. The study should include a review of the costs of such anticompetitive behavior to America's premium-paying public, and for your committee's interest particularly, to the small businesses of America.

I would be happy to answer any questions you might have.

[The prepared statement of Mr. Hunter follows:]

PREPARED STATEMENT OF ROBERT HUNTER, PRESIDENT, NATIONAL INSURANCE CONSUMER ORGANIZATION

Mr. Chairman and Members of the Committee, it is my pleasure to appear before you today, at your request, to review the impact of various practices upon the workers' compensation insurance rates charged to small businesses across the country.

The National Insurance Consumer Organization (NICO) has reviewed workers' compensation ratemaking practices and concludes that two practices are unfair to ratepayers generally and to small businesses specifically. These are the handling of investment income and the off-balance in the expense rating plans. If they were corrected, small businesses would pay 15–20 percent less for workers' compensation insurance, in most states.

By way of background, in most states rates are established by a cartel called the National Council on Compensation Insurance (NCCI). Adherence to these rates is required of all insurers (except self-insurers) in many states, although 14 states allow deviations. Competition takes the form of non-price competition such as engineering loss prevention services (although this is not usually true for small businesses) or in dividends (regulated in some states), package selling (such as lowering auto premiums for larger risks to relieve workers' compensation rigidity) and self insurance.

In 6 states there are monopolistic state funds which write all the workers' compensation insurance; in 13 states there are competitive state funds which compete with private insurers.

Mr. Chairman, I suggest that it might be of interest for your committee to study the efficiency of the major workers' compensation delivery systems. I am confident that you will find that the most efficient system is the monopolistic state fund, the least efficient the private insurers. The reasons why and the import of this phenomenon on small businesses would be an important contribution to understanding the

workers' compensation delivery mechanisms generally. To quote from the excellent new book on insurance, The Invisible Bankers:

. . . a study by the Minnesota legislature ranked Ohio's workers' compensation system in the top six among all states for benefits, but eleventh from the bottom in cost.

The Independent Insurance Agents of Ohio were not impressed. They argued that Ohio's little guy was getting a raw deal. That's why they were fighting to change the system—not the commissions they would earn. Heck no. It was the principle that counted. (Still, with an annual premium volume of $500 million or so, there would have been in excess of $25 million in new commissions for Ohio's independent agencies to go after each year—an extra $12,500 apiece.) It was in pursuit of this principle that the agents attempted to obtain the 250,000 signatures needed to place their constitutional amendment on the ballot. So great was their zeal for this principle, in fact, that they would tell passersby just about anything to get them to sign the petition. "Sign this to lower your income tax," people were told, for example. Confronted with tape recordings of such solicitations, the agents quietly agreed to back down rather than be sued for fraud.

But Ohio is viewed as a bellwether in the workers' compensation field. If a few other states switch to exclusive funds (and drives are on in several to do just that), it's thought the momentum could become formidable. So after Ohio's independent agents backed down, the American Alliance of Insurers [the mutuals] stepped in. They brought with them a high-class Washington public relations firm and more than $5 million to sway public opinion. It was too late for the 1979 election, but after more than a year's work, with three months to go until the November 1981 election, they were leading in the polls. Their appeal was to competition and free enterprise, God and country. Never mind that the state's large labor unions and employers were both opposed.

As it turned out, the $5 million (our $5 million, added on to our insurance premiums) was wasted. The industry's initiative was defeated by a four to one margin.[1]

Inefficiency of delivery of workers' compensation insurance adversely impacts large as well as small purchasers of insurance (although the small cannot self-insure as readily). I propose that the Committee consider risk retention groups for workers' compensation similar to those Congress allowed for product liability insurance. Critical to grouping of small businesses—and consequent significant cost savings—is the striking down of anti-competitive state laws prohibiting such groupings. The product liability bill did that for product liability but not for workers' compensation. Why not workers' compensation? For that matter, why not for auto insurance, too?

Getting to ratemaking practices:

INVESTMENT INCOME

Professor Raymond Hill of Princeton University and I recently submitted a draft report to the U.S. Department of Labor entitled Workers' Compensation Insurance Ratemaking: Regulation of Profit Margins and Investment Income. I have submitted one copy of that lengthy draft paper for the Committee's use. A final report, with technical corrections will be available shortly. We concluded that the "traditional operating-profit margin used (by NCCI) in ratesetting is entirely arbitrary because it ignores over-all insurer profitability and the contribution of investment income to over-all profits" and that the "traditional margin is significantly higher than underwriting margins suggested by methods that take investment income into account." We concluded that "our research indicates that . . . (a negative 10 percent margin is) currently much nearer the proper competitive level than is the traditional positive 2.5 percent margin." In a nutshell, this is an impact on manual rates of about 15 percent.

Our study comports with findings such as those in Arizona and Minnesota studies undertaken over the last year. The cartel, however, disagrees with our conclusions, maintaining that competition somehow returns any excess profits to the insured. I disagree with their response, but even if they are correct, the question remains: How does the small business, manual ratepayer obtain such benefit? It is my firm belief that, if in fact investment income is partially returned to customers, small businesses get almost none of it.

The National Association of Insurance Commissioners (NAIC) has been aware of the investment income issue in workers' compensation for many years. In 1951, the

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[1] Tobias, Andrew, "The Invisible Bankers: Everything the Insurance Industry Never Wanted You to Know," Linden Press, 1982, p. 169.

NAIC Subcommittee on Profit and Contingency Factor to the Workers' Compensation Committee said:

The Committee believes that there should be included in the ratemaking formula, a factor for profit, but that the factor used should be demonstrated for each state by factual data to be such that it will produce only a just and reasonable return on invested capital and surplus devoted to Workmen's (sic) Compensation business, with due consideration being given to any special conditions of individual states and to investment earnings. (NAIC Proceedings, 1951, p. 384.)

Only now are the states really beginning to dig into this issue. I particularly congratulate Commissioner Markman of Minnesota for his brilliant order of April 21, 1981, the state-of-the-art in Workers' Compensation insurance ratemaking.

I attach a Report to the NAIC (D–1) Subcommittee from its Task Force on workers' Compensation Ratemaking dated May 9, 1973; the NCCI's October 12, 1973 response and the Task Force Chairman's comments regarding such response dated October 25, 1973. This correspondence is important both because of the investment income discussion of almost twenty years ago and because of the discussion on "Ratio of Manual to Earned Premiums" or off-balance, our next topic.

OFF-BALANCE FROM EXPERIENCE RATING

For decades, the ratemaking process in use in most states by NCCI has included an off-balance factor to "correct" for experience rating overages or shortfalls.

Experience rating is a plan applied, under NCCI rules, to larger risks than those which pay manual rates. The Plan adjusts the otherwise applicable manual rate to reflect the individual insured's experience. The larger the insured's premium, the more reliance is placed upon the experience of the insured and the less on the manual rate. The better the experience, the lower the final premium to be paid becomes, and the worse the experience, the higher the premium becomes. This is fine in theory and would be in practice if the experience rating plan's debits and credits offset one another. But they do not; thus a so-called "off-balance" exists.

Off-balances can be up or down. That varies by state. But what NCCI does in setting rates is build back the off-balance into manual rates. Thus, those to whom experience rating does not apply (the small business paying manual rates) either gets a benefit or foots the bill for the long or shortfall of dollars caused by the experience rating of larger businesses. As the attached 1973 discussion indicates, New York eliminated this practice in 1948. Your committee should thoroughly investigate this potentially unfair discriminatory ratemaking practice and the New York solution to it.

COMPETITION

Finally, your letter of invitation asked if workers' compensation rates established under open competition would be in the public interest.

I have been reluctant in personal lines, like auto and homeowners insurance, to unequivocably endorse competition as a rate regulator, particularly because of severe consumer information problems and the problem of untrammeled selection rights that insurers have to reject risks with or without cause. Workers' compensation buyers are much more sophisticated, however, and the problem of information is therefore much less acute. Whether insurer selection rights should be limited in workers' compensation for small businesses, a coverage required for almost all states, presents an interesting regulatory and legal issue. In Michigan, the Supreme Court found that due process rights of persons required by the state to buy auto insurance were violated when insurers rejected them. This theory presumably holds in workers' compensation. It is worthy of study, I think, in the workers' compensation insurance context.

Studies undertaken in the states of Arizona, Minnesota and Illinois by the NAIC and by Dr. Hill and myself all suggest a greater reliance on open competition in ratesetting in workers' compensation is appropriate.

President Ford's Justice Department Task Force on Anti-Trust Immunities agreed. In its report The Pricing and Marketing of Insurance (January, 1977) it concluded:

* * * Workmans' compensation appears to be one line of P–L insurance which is perhaps most conducive to total state rate deregulation and full exposure to market controls: there is relatively greater predictability and stability in the industry, the buyers of the service are generally informed, there is potential for vigorous price competition, and there are economic incentives to employ loss controls. Small insurers should be able to compete through the formation of safety-groups, and access to trended loss data and price information within the confines of the federal antitrust

laws. Reinsurers would serve as a restraining influence on small insurers as to the selection and price of risks. Finally, regulators could supervise for solvency and utilize, where necessary, guaranty funds . . . . (page 248.)

The Task Group's report politely alludes to the fact that resistance to opening workers' compensation insurance to the full forces of competition are, as they put it, ". . . a political rather than an economic or social decision." (page 241.) Indeed, the political clout which has held the system from competition particularly comes from the mutuals. As the report notes, "Stock companies . . . sought state-by-state approval of . . . plans which would have permitted intensified up-front price competition. These efforts, which were strenuously resisted by the mutuals at administration (sic) hearings and through the courts, met with minimal acceptance under state laws." (page 245.)

In other words, when you're winning the ball game, you don't want the ground rules changed (many mutuals are large writers of workers' compensation—Liberty Mutual being the leading writer with about 9 percent of the market, the leading writer in 21 states).

This poses yet another interesting question: why would mutual insurers resist change that would likely benefit their owners (the policyholders)? Andrew Tobias may have the answer: "The managements of mutual companies are in a very real sense responsible to no one but themselves." [2]

This opinion is not limited to Mr. Tobias, viz:

Senator METZENBAUM. Would Metropolitan be receptive to exploring the possibility of giving greater opportunity to its owners to nominate a director than they have now under the New York law?

Mr. SHINN (President and Chief Executive Officer of Metropolitan Life Insurance Company). Senator, I do not want to get off on a tangent here, but we regard them not as owners. . . .

Senator METZENBAUM. You do not consider the mutual policy-holders as owners?

Mr. SHINN. We do not think that they are owners of the company.

Senator METZENBAUM. That is a very interesting concept.[3]

The National Commission for the Review of Anti-Trust Laws and Procedures recommended repeal of the broad anti-trust immunity of McCarran-Ferguson.[4] It did not suggest any exception for workers' compensation.

Mr. Chairman, I urge this Subcommittee to initiate a General Accounting Office study of the anti-competitive aspects of the regulatory delegation Congress made to the states in 1945 (in P.L. 15—the McCarran-Ferguson Act) to determine if legislative standards for such regulation should be introduced in order to generally improve competition in insurance. As part of that study, I suggest specific research into ways to assure small businesses have access to essential workers' compensation insurance at affordable prices. You should also ask GAO to review the state anti-rebate laws, fictitious group laws, cartelized ratemaking and other anti-competitive actions allowed under McCarran-Ferguson today. The study should include a review of the costs of such anti-competitive behavior to America's premium-paying public.

Mr. Chairman, I would be happy to answer any questions you or other members of the Subcommittee may have.

Mr. LAFALCE. Thank you very much, Mr. Hunter. I do have a few questions.

There is going to be some testimony later this morning that the State-operated monopoly in Ohio pays out $1 in benefits for every 84 cents in premiums. To put it another way, it appears that in Ohio, for $1 of premium, $1.20 is paid out in benefits.

If that is correct, is it correct to assume private carriers pay back on the average approximately 75 cents in benefits for every dollar of paid premium?

Mr. HUNTER. It is something of that order, looking over the list that for several years I had available in my office. It is approximately 75 cents.

Mr. LAFALCE. Is it also fair to assume that if you substituted a system in which the $1.20 in benefits were paid out for every dollar

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[2] Ibid., page 39.
[3] Rights and Remedies of Insurance Policyholders, Part 2, May 10, 1978 hearing, page 988.
[4] Report to the President and the Attorney General, January 22, 1979.

of premium, in place of a system that had previously delivered 75 cents in benefits for every dollar of premium, that you would therefore have a 60-percent increase in benefits? Is that correct?

Mr. HUNTER. It would be very close to 60 percent, yes. The way to find out is to divide 0.75 into 1.20, and if that comes out 1.6, as I think it does, it would be an increase of 60 percent in benefits.

Mr. LAFALCE. Mr. Hunter, are you aware of the benefits-to-premium ratio in my home State of New York?

Mr. HUNTER. Yes.

Mr. LAFALCE. Could you expand upon that a bit and perhaps compare the New York experience with the State of Ohio?

Mr. HUNTER. I have in front of me a copy of the 1978—that's rather old, and I understand there's a later year available, but I have not received it—loss and expense ratios, published by the New York Insurance Department. Looking at table 9, which is workers compensation insurance, it indicates that in New York the approximate payout, looking at incurred losses compared to premiums earned, has run between 74 and 81 cents for the stock insurance companies for the 5 years ended 1978, and from 60 cents to 75 cents for the mutual companies. If you factor in their investment gain and their dividends, it looks to me like it would roughly be 75 cents on an overall basis also. So it would be about the same as the countrywide average. Private insurers in New York appear to be delivering about the same level of benefits as the countrywide 75 cent average.

Mr. LAFALCE. And comparing that with Ohio?

Mr. HUNTER. Obviously, it is not $1.20 for every dollar; it is 75 cents for every dollar. So it is much less than Ohio in terms of benefits delivered per dollar of premium paid.

Mr. LAFALCE. Do you have any information on how much investment income is being reported by the companies in New York State?

Mr. HUNTER. Yes. Again through 1978, the stock companies were reporting—and this is an allocation procedure that they utilize—for workers comp in 1978 they were reporting about 8 cents of investment income for the stock and mutual insurance companies combined for every dollar of premium they earned. The State insurance fund was reporting 14 cents. That is interesting because the State insurance fund had reported as much as 25 cents of investment gain in that period. During that 5-year period they had ranged between 14 and 25 cents of investment income for every dollar of premium earned. The stock in mutuals ranged between 6 and 8 cents. So it is interesting that the State fund reports a much higher investment earning.

Mr. LAFALCE. Do you have any explanation for that?

Mr. HUNTER. Well, it could be the way investment income is allocated by the private carriers under the annual statement. In which case, that would mean that the stock and mutuals are really doing better with investment income, and that the 75 cents is actually an overstatement of what they pay out in benefits. It also could be that the State insurance fund is better at investing. One or the other, I guess.

Mr. LAFALCE. There is a certain profitability factor that is used in the ratemaking process, is that correct?

Mr. HUNTER. Yes. Normally, the National Council on Compensation Insurance uses a positive 2½-percent underwriting profit factor in establishing its rates.

Mr. LAFALCE. Now, they have used that 2½-percent profitability factor for a considerable period of time, have they not?

Mr. HUNTER. Yes, they introduced it, and my recollection is, and I could verify the date because I have a letter when they introduced it. I believe it was in 1949——

Mr. LAFALCE. Over 30-some years ago.

Mr. HUNTER. Yes; before that they had no profit provision in rates. It was zero. They introduced it in part, at least, because they said their investment income had fallen from the early twenties, when they had put it in at zero, and because their investment income had dropped. In 1949 they introduced a 2½-percent profit provision. There is a letter attached to Dr. Hill and my report from the general manager of the National Council to the National Association of Insurance Commissioners announcing this decision.

Mr. LAFALCE. Would you have any idea what the profitability factor should have been if it were calculated with hindsight over the past 10 years or so?

Mr. HUNTER. Well, our current projection of profitability factor as of today, as I said in my statement, would indicate that an underwriting loss of 10 percent would be approximately right. In other words, the profit margin should be 12½ percent lower from underwriting because of the tremendous interest rate opportunities available for insurers to invest the float. Workers comp is a relatively long-tailed line, which means they get the premiums today but they don't pay out losses for many years because of the nature of the line. Some of the claims are paid out fast, but on average, our study indicates they hold the money about 2 years before they pay out the average loss. Obviously, at today's interest rates, that generates a great deal of income. That's why an underwriting loss of 10 percent can still result in a profit which is fair for the companies in today's climate.

Mr. LAFALCE. Would you care to expand upon the various forms of nonprice competition that you refer to in your statement?

Mr. HUNTER. Well, there are several, but the major one I guess is engineering services. There is competition among the companies to give good service to reduce losses. That's a very positive and beneficial thing for the Nation and for the individual companies. That, of course, doesn't usually occur for the small business so much, although there is some of it. Most of the engineering services are targeted at the larger accounts.

There is price competition shifted over into other lines of insurance because of the rigidity of the workers comp situation that is impossible to measure.

Mr. LAFALCE. Do the small businesses benefit from that type of price competition that is shifted?

Mr. HUNTER. No; they are paying manual rates probably for their other lines of insurance as well.

They do get dividends, these small businesses. So to the extent that dividends are paid, they would benefit from that. Our study indicates that even if you add in the dividends, the profitability does not approach what a competitive level profitability would be if

competition were fully in force in this marketplace, so there still are excessive profits even after dividends. So small businesses are being shortchanged, I am quite sure.

Mr. LAFALCE. President Ford's Justice Department Task Force on Antitrust Immunities quoted one major insurer of workers compensation as suggesting, in effect, the concept of open rating of workers compensation was sacrificed as part of a compromise in many States in order to secure open competition rating for other lines of insurance.

Do you have any perspective on that?

Mr. HUNTER. Well, I think my statement gets into that when I talk about the fact that the mutuals will fight to the death to protect the cartelized system in workers compensation. I think if you look at the report of the Advisory Committee on Competitive Rating to the National Association of Insurance Commissioners, in the comments, the minority reports in the back, you will find statements that imply that.

Mr. Mertz, of the National Association of Independent Insurers, which organization you say today supported open competition rating, has stated on page 140 that "we have acceded in recognition of the concerns expressed by some committee members in the development of a bill which would receive broad support." I think that is right in the context of workers compensation, so it is clear they were under pressure in the NAIC context from some members of the committee to hold the cartel line on comp, I would guess in return for which there would be broader support for the model bill which emerged.

That's just my surmise. But I think it has been true for many, many years that the mutuals have fought, as indicated even in the Justice Department report, to hold the line on a noncompetitive system because they do better under that.

Mr. LAFALCE. Mr. Hunter, your organization was commissioned by the Department of Labor to prepare a report on insurer investment income——

Mr. HUNTER. Not my organization. Myself as an actuary.

Mr. LAFALCE. You personally. All right.

Of course, you, as some people don't know, were formerly head of the Federal Insurance Administration. During what years?

Mr. HUNTER. Well, I was Acting Administrator and Administrator from 1974 to 1978 in varying——

Mr. LAFALCE. A 4-year period.

Mr. HUNTER. About 4 years.

Mr. LAFALCE. With both Republican and Democratic administrations?

Mr. HUNTER. That's correct.

Mr. LAFALCE. Is it fair to say that there were some parties who were very interested in not having your report made public?

Mr. HUNTER. I don't know. I have not seen any pressure and I certainly don't know of any. The Department of Labor might be able to tell you something. I don't know of any pressure. In fact, the report has gotten very wide distribution within the industry. We have gotten comments back from the industry. It is on the agenda for the National Association of Insurance Commissioners meeting. It was supposed to be on the agenda at their December

meeting but Commissioner Markman couldn't make the meeting because of budget problems and it was canceled. So it will be on a future meeting for discussion. So it has gotten fairly wide distribution.

I know the Department of Labor sent it out to several people.

Mr. LAFALCE. When can we expect it will be made public?

Mr. HUNTER. Oh, I don't know. We have the right to make it public as authors 90 days after we gave it, which we have the right now to make it public. We're just waiting to finalize it. I have been tardy myself in getting it finalized just because of the press of other things. But it is now in the typewriter, as a matter of fact, for final typing.

Mr. LAFALCE. Very good.

The record will be held open at this point for the introduction of all or portions of the Hunter report that was commissioned by the Department of Labor.

[The report follows:]

WORKERS' COMPENSATION INSURANCE RATEMAKING: Regulation of Profit Margins and Investment Income

by Raymond Hill and Robert Hunter

BIOGRAPHICAL NOTES

Raymond Hill is Assistant Professor of Economics and Public Affairs at Princeton University, where he teaches courses in finance, industrial organization, and the techniques of cost/benefit analysis. He received his Ph.D. in economics from M.I.T. in 1978, where his dissertation was on the pricing of insurance contracts in competitive capital markets. Since then, he has worked on questions of insurance regulation for several state insurance departments. He has also been a consultant to the central bank of Portugal, the Civil Aeronautics Board, Children's Television Workshop, and the secretariat of the General Agreement on Trade and Tariffs. During the 1979-80 academic year he took a leave of absence from Princeton to serve as Special Assistant to the Undersecretary of State for Economic Affairs.

Robert Hunter is President of the National Consumer Organization and a consultant on insurance public policy matters for state and federal agencies. He is a Fellow of the Casualty Actuarial Society, a Member of the American Academy of Actuaries and a Member of the International Actuarial Association. Formerly, he served in the public sector as Federal Insurance Administrator, Deputy Federal Insurance Administrator and Chief Actuary of the Federal Insurance Administration. In the private sector, he was Associate Actuary of the Mutual Insurance Rating Bureau and the Mutual Insurance Advisory Association. He was a supervisor in the Actuarial Department of the National Bureau of Casualty Underwriters. He was a workers' compensation and automobile insurance underwriter at Atlantic Mutual Insurance Company and Centennial Insurance Company. He is the author of Taking the Bite Out of Insurance: Investment Income in Ratemaking and other insurance technical publications.

WORKERS' COMPENSATION INSURANCE RATEMAKING: REGULATION OF PROFIT MARGINS AND INVESTMENT INCOME

Summary

We live in a time of high interest rates. Yet, under traditional ratemaking practice, the purchasers of workers' compensation insurance give insurers what amounts to interest-free loans every time they purchase insurance or pay renewal premiums. This loan without interest results from the significant investment income generated by workers' compensation insurance because it takes a long time to settle many workers' compensation claims. The so-called "long-tail" -- reflecting the slowness in ultimate settlement of workers' compensation claims -- enables insurers to earn particularly large investment returns. Moreover, the "loan" occurs with the knowledge and acquiescence of state lawmakers and insurance commissioners but without adequate and clear disclosure to the premium payers.

Part of every premium dollar is put, by insurers into "unearned premium reserves" and "loss reserves."[1] State regulators require that these reserves be carefully invested and maintained

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[1]State law requires the establishment of "unearned premium" reserves and "loss" reserves; "unearned premium" reserves are monies set aside to cover the portions of premiums paid by consumers to insurance companies that are not yet "used up" or "earned" by exposure to risk. Thus, for a policy of one year term, written on January 1, the premium is one-fourth earned, three-fourths "unearned" on April 1. A "loss" reserve is money set aside to cover claims not yet paid. As accidents occur, insurers are required to estimate the amounts that will eventually be paid and to establish a present liability for financial statement purposes. (Footnote continued on next page)

since the money must be available to pay the claims of insureds and other claimants as they arise; the insurers are acting as a sort of "trustee" in the transaction. As of December 31, 1979, property/casualty insurers held, for all lines of insurance they write, $81 billion in loss and loss expense reserves and $34 billion in unearned premium reserves,[2] and these reserves almost never decline from year to year. This huge "float" that the insurance companies hold in trust for the fulfillment of their promise of future services to America's insurance purchasers would generate earnings at current interest rates well in excess of $10 billion annually. This compares with premiums written in 1979 of $90 billion. The investment income is important to insurers since it contributes substantially to the insurance companies' ability to earn higher profits than would otherwise be expected.

If insurance companies were subject to the pure competition of economic theory, that competition would result in prices and "underwriting profits" which fully reflected this ability to earn investment income. But insurance companies are not in a purely competitive market. Prices are regulated in every state. Proposed rates are developed by a cartel-like organization on behalf of all firms together and submitted to regulatory commissions for approval. Because of this state regulation, insurance

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These reserves are designed to protect policyholder's interests in an insurance company; by requiring that these funds be reserved and treated as actual rather than contingent liabilities, state regulators guarantee protection of policyholders and claimants no matter what happens to the company. Because of this, these reserves enjoy special treatment under Federal tax laws (i.e. claims costs are counted as expenses against profits for tax purposes when the reserve is established, not when the loss is paid).

[2] Best's Aggregates and Averages, page 2 (1980).

firms are essentially exempt from the federal antitrust laws under the McCarran-Ferguson act. Later in the paper, we discuss the extent of competition given this regulatory structure.

Purpose of Study

The constraints on competition in workers' compensation mean that we cannot automatically assume investment profits are reflected in lower premiums. Our purpose in this paper is to analyze and evaluate workers' compensation ratemaking procedures used to establish profit margins and how those margins reflect the investment of policyholder "float". Further, we will present alternative approaches to rate-making that attempt to fully take into account investment income. We will also give rough estimates of the rate level impact of more realistic reflection of these alternatives.

Our study reaches the following conclusions:

1. The traditional operating-profit margin used in rate-setting is entirely arbitrary because it ignores over-all insurer profitability and the contribution of investment income to overall profits.
2. The traditional margin is significantly higher than underwriting margins suggested by methods that take investment income into account.
3. The gap between the traditional margin and the proposed alternative has widened as interest rates have risen with inflation.
4. Actual profit margins earned in the industry have not

reached the traditional margin in ratemaking of 2.5%. Competition appears to have acted to move them in the direction one would predict using the models that reflect investment income.

5. Since actual margins fall below those set in the rate-making process, even though the 2.5% rate exceeds the competitive level one cannot automatically assume that this traditional margin has produced excessive returns. If returns have not, however, been excessive, the process of setting profit margins in regulatory ratesetting proceedings has been largely off the mark. If the process of establishing profit margins is to have any integrity, accounting for investment income, should be made a routine part of the regulatory process.
6. If overall profit needs of insurers were determined by some ratemaking process that took into account investment income's contribution, the allowed margin in rates for underwriting "profit" would be negative at the present time. These negative margins would still produce reasonable returns to equity for insurer shareholders.
7. Studies undertaken by the states of Arizona, Massachusetts and Minnesota also indicate that profit margins in rates currently should be negative. For instance, Minnesota recently ordered a negative 10% margin for underwriting profit (See Appendix 4). Our research indicates that these state outcomes are currently much nearer the proper

competitive levels than is the traditional (positive 2.5%) margin.

Background

Workers' compensation was the earliest form of social insurance adopted in the United States. It was intended to fill the void when a worker and his or her family lost income and incurred expenses from injury or death on the job. In workers' compensation, employees exchanged the right to sue for guaranteed benefits when an injury arose "out of and in the course of employment." However, for a number of reasons, employers and the insurers have often been able to either delay compensation or settle the claims for what appear to be amounts not related to large loss.[3]

There is a workers' compensation system in place in all 50 states and the District of Columbia. The features are similar:

> Workers' compensation provides cash benefits, medical care, and rehabilitation services for workers who suffer work related injuries and diseases. To be eligible for benefits, normally an employee must experience a "personal injury arising out of and in the course of employment."[4]

The types of injuries that occur to workers are varied and can last from a few days to many years in duration.

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[3] Workers' Compensation: Is There a Better Way? Report to the President and Congress of the Policy Group of the Interdepartmental Workers' Compensation Task Force, January 1977, pp 27-28.

[4] The Report of the National Commission on State Workmen's Compensation Laws, 1972. Page 32.

> When an injury or disease falls within the scope of the workers' compensation program, the employer must furnish medical care, usually unlimited in time or amount. . .Cash benefits usually are classified as temporary total, temporary partial, permanent total, permanent partial, and death benefits. Temporary total benefits are paid to employees unable to work after a specified waiting period. Temporary partial benefits are paid during a period of reduced earnings. These temporary benefits cease when the worker returns to full wages or is found eligible for permanent total or permanent partial benefits. Permanent total benefits are paid to those disabled completely for an indefinite time. Permanent partial benefits are paid if the employee incurs an injury or disease which causes a permanent impairment or experiences a permanent but partial loss of wages or wage earning capacity. . . For each category of benefits, all States prescribe a maximum weekly benefit and usually a minimum weekly benefit. . .[5]

These benefit systems require large reserves for losses (amounts to be paid to claimants -- injured workers) to cover the long duration of benefits that workers' compensation claims can entail. Workers' compensation laws require the purchase of such insurance in all states and jurisdictions in the United States. Self insurance is an option in all but four jurisdictions.[6] In 13 states, a state compensation fund competes with private industry in supplying workers' compensation insurance. Further, six jurisdictions have exclusive (monopolistic) state funds for the

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[5] The Report of the National Commission on State Workmen's Compensation Laws, 1972. Page 32.

[6] Analysis of Workers' Compensation Laws, Chamber of Commerce of the United States, 1980 edition, Chart I, page 3. The four jurisdictions are North Dakota, Puerto Rico, Texas and Wyoming.

provision of workers' compensation insurance.[7]

Market Growth

We estimate the cost of workers' compensation to employers, measured by premiums paid, will be about $18 billion in 1981. It is estimated that about one-half of workers' compensation coverage is in private insurance, one-third in state funds, and the rest in self insurance.[8] In this paper, we focus upon the ratemaking procedure followed by the private insurers.

The market for workers' compensation has been growing rapidly both in absolute terms and relative to other lines of insurance. Over the fourteen year period from 1964 through 1978, premiums written grew at a compound rate of 13.6%, which represents a growth in real (adjusted for inflation) terms of 8.1%. The 13.6% figure for workers' compensation compares to a growth of 11.3% for all property/casualty lines of insurance.

There are approximately 650 companies which sell workers' compensation in the United States. A little less than a quarter of those are mutual companies; the remainder, stock. As one would expect given the large number of firms, the industry is not particularly concentrated. The market share of the four largest firms amounts to 25.5% As Table 1 illustrates, most state markets are similarly unconcentrated. Liberty Mutual is the leading

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[7]Ibid, Chart XIII, page 39. Competitive funds exist in Arizona, California, Colorado, Idaho, Maryland, Michigan, Montana, New York, North Dakota, Oklahoma, Oregon, Pennsylvania and Utah. Exclusive State funds exist in Nevada, Ohio, Puerto Rico, Washington, West Virginia and Wyoming.

[8]Price, Workers' Compensation: 1978 Program Update, Social Security Bulletin, October 1980, Volume 43, No. 10, Table 3.

Worker's Compensation Concentration Study

Table 1

	Top 4	Top 8	Top 20	Top Company	Top Company Growth 1975 % of Market	Top Company Growth 1979 % of Market
Alabama	35.2%	48.2%	75.9%	Liberty Mutual	9.1%	11.2%
Alaska	77.3	91.5	99.1	INA Group	41.4	45.6
Arizona	34.5	53.0	84.2	Mission Insur.	7.6	12.4
Arkansas	22.9	43.8	79.1	Aetna L & C	3.3	5.9
California	26.8	46.5	76.5	INA Group	4.5	7.7
Colorado	28.6	49.4	77.4	Liberty	4.8	8.0
Connecticut	53.5	68.7	87.7	Aetna L & C	10.7	15.7
Delaware	32.6	50.5	80.9	Liberty	13.1	11.5
D.C.	57.0	78.9	93.0	Liberty	8.3	19.1
Florida	28.2	43.2	71.9	Liberty	7.9	9.8
Georgia	30.3	45.6	74.1	Liberty	11.3	14.9
Hawaii	56.4	77.4	96.9	Continental	20.4	21.8
Idaho	54.9	68.2	87.5	Teledyne	19.1	19.8
Illinois	25.1	43.0	75.0	Liberty	5.9	8.0
Indiana	24.5	42.2	73.6	Liberty	6.5	6.6
Iowa	24.8	40.5	70.0	Liberty	4.9	7.2
Kansas	31.7	48.5	74.8	Travelers	8.4	12.0
Kentucky	49.7	63.1	82.8	Old Republic	17.8	27.7
Louisiana	28.1	50.4	82.4	Aetna L & C	4.6	8.0
Maine	48.5	68.5	92.4	Liberty	12.8	19.8
Maryland	32.1	49.0	77.7	Travelers	8.0	10.3
Massachusetts	44.8	63.6	87.8	Liberty	15.9	21.3
Michigan	27.9	46.6	74.5	Mich. Mut.	8.3	8.7
Minnesota	31.8	49.3	74.9	Liberty	5.3	8.5
Mississippi	50.3	64.9	84.9	USF&G	19.9	23.8
Missouri	27.2	44.1	73.2	Liberty	9.8	11.6
Montana	35.1	55.0	83.9	INA Group	7.4	13.6
Nebraska	23.2	39.9	68.6	Travelers	6.4	6.3
Nevada	FUND					
New Hampshire	41.3	66.5	88.5	Liberty	10.4	12.8
New Jersey	45.2	59.1	82.1	NJ Mfgs.	20.7	26.6
New Mexcio	35.0	52.3	79.7	Mountain Sts.	8.9	9.4
New York	30.7	45.4	74.3	Liberty	6.7	10.1
North Carolina	39.9	55.4	79.4	Liberty	17.0	19.0
North Dakota	FUND					
Ohio	FUND					
Oklahoma	32.4	50.9	79.2	Home	6.8	10.4
Oregon	60.7	74.3	93.0	Employer Benefit	6.9	32.8
Pennsylvania	35.7	52.7	77.7	Penn. Mfgs.	19.7	13.3
Rhode Island	53.4	68.0	87.7	Liberty	7.1	21.0
South Carolina	42.7	59.6	82.7	Liberty	16.8	19.8
South Dakota	29.1	45.6	71.4	Western	7.9	10.6
Tennessee	36.5	54.5	80.5	Liberty	11.4	12.4
Texas	34.5	51.7	79.7	Employers of Tex.	17.4	18.1
Utah	40.5	60.7	89.4	Liberty	8.9	14.6
Vermont	34.0	60.2	90.9	Aetna L & C	10.9	9.8
Virginia	39.8	56.6	80.7	Liberty	11.4	12.1

Table 1, Page 2
(continued)

	Top 4	Top 8	Top 20	Top Company	Top Company Growth 1975 % of Market	Top Company Growth 1979 % of Market
Washington	FUND					
West Virginia	FUND					
Wisconsin	41.6%	56.3%	78.9%	Employers of Wausau	28.4%	23.8%
Wyoming	FUND					
USA	25.5%	39.7%	64.7%	Liberty	7.5%	9.1%

	1979	1978	1977	1976	1975
National Agency Cos	57.7%	57.5%	58.0%	59.4%	59.9%
State Agency Cos	16.6	15.7	15.7	15.6	15.9
Direct Writers	25.7	26.8	26.2	24.9	24.2

Source: Best's Executive Data Service, Report A7 - 1979.

firm nationally with 8.9% of the market; it is also the leader in 21 individual states.

Regulation and Competition

Premium rates for workers' compensation insurance are regulated in every state. Price regulation was introduced under the premise that too much competition would endanger the solvency of firms in the industry. Since policyholders and their employees would be harmed if workers' compensation firms were unable to pay claims, regulation has typically set minimum rates. Because it is regulated, the industry enjoys exemption from the anti-trust laws. This exemption permits the industry to use state rating bureaus to establish rates for all firms, subject to approval by regulators.

Competition in this regulated environment occurs in several forms. One is through the level of services offered, including loss prevention activity such as engineering studies of workplace environments. The second means of competition is through dividends paid to policyholders. Dividends paid by stock firms have averaged 4.7% of the premium dollar over the period 1971 to 1978.[9] Dividends represent a kind of "back-door" price competition. Like pricing policy in unregulated industries, dividend policy is an important part of many firms' competitive strategy, although it has been subject to regulation in some states.

Competition also exists based upon package selling to

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[9] From New York Insurance Department Loss and Expense Ratios. Mutual company dividends averaged 11.8%, but they included an amount properly treated as comparable to the return to equity for a stock company.

businesses of automobile insurance, general liability insurance, fire insurance, and other coverages together with workers' compensation insurance. Premiums on these other lines are sometimes lowered below competitive levels for large risks in order to offset the workers' compensation premiums which are regulated. Measurement of this effect is difficult, at best. It likely is used to select against single line writers of workers' compensation insurance, such as competitive state funds. Finally, there is apparently an increasing amount of competition from self-insurers. Self-insurance is undertaken by larger employers that qualify as self-insurers under state law. As previously mentioned, an estimated one-sixth of the market is now self-insured.

In addition to the regulation of prices, solvency in the industry is regulated as well. Each state sets minimum capital requirements, and reserving practices are monitored.[10] Every state also requires participation in some type of state fund, which ensures that policyholders will be reimbursed if an insurer becomes insolvent. Further, the risk of insolvency is reduced by the purchase of reinsurance by the workers' compensation primary insurers.[11]

Since insolvency, the original motive for regulation, is directly monitored and made a less important factor through use of state insolvency pools, a number of states

[10] The strictiness and frequency of such monitoring apparently varies significantly from state to state.

[11] In Minnesota, the state has established a reinsurance association to which all insurers and self-insurers belong, which reinsures, on the broadest base, large claims. From a letter to member companies dated June 11, 1980.

have been rethinking their regulation of workers' compensation insurance rates. Minnesota is in the process of introducing competitive rating this year and the legislatures of Arizona, Illinois, Oregon, and Wisconsin have been considering such a measure.[12]

The NAIC recently completed work on its model legislation for competitive rating in all lines of non-life insurance. The model legislation allows competitive pricing and forbids compulsory membership or adherence to state rating bureaus. The industry has backed the application of the model to all lines except workers' compensation.

The insurance industry position is that "workers' compensation. . .does not meet the necessary criteria to qualify for. . . competitive pricing freedom. . .one of the reasons workers' compensation now fails to meet those criteria is the rigidity of the existing laws governing it, and the concurrent adherence rule adopted by the National Council on Compensation Insurance and most individual state rating organizations functioning in this line of insurance."[13]

The argument that deregulation cannot work because current regulation is strict is inconsistant. Indeed, one could make the argument is that workers' compensation is a line of insurance where competition would flourish, since the buyers are businesses insuring on a relatively large scale compared to the smaller individual purchases of say, automobile insurance. As a result, worker's compensation consumers should be better equipped and have greater incentives to acquire information about prices and quality of service.

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[12]Business Insurance. "Arizona to Test Open Comp Rating." February 9, 1981.

[13]Report of the Advisory Committee on Competitive Rating to the National Association of Insurance Commissioners, May 1980, p.43. Adherence rules pertain to the procedures by which the National Council of Compensation Insurance and state rating organizations assure that the rates they adopt will be used by all insurance companies.

The Current Method of Profit Regulation

The insurance industry's ratemaking system has traditionally relied on a formula allowing for profits equal to 2.5% of gross premiums ("underwriting profit"), but without taking into account the investment income earned on the reserves associated with those premiums. The traditional defense of this system has been to argue that the 2.5% underwriting profit factor was selected giving "due consideration" to investment income, a requirement of the laws of most states. Most of the controversy over the years regarding investment income and proper profits for insurers has been in the private passenger automobile line of insurance.[14] New York reflected investment income in automobile rates as early as 1947. The debate has occurred in many states since then. Currently, 17 states mathematically adjust rates for private passenger car insurance, while 35 jurisdictions do not.[15] In automobile insurance, many models for the reflection of investment income have been developed, including an industry approach relying on historic data, and several state approaches.

It appears that the issue is not as well developed for workers' compensation -- and is only beginning to be a "front burner" issue in most states. Only one state (Massachusetts) utilizes a formal procedure by which investment income is reflected in the ratemaking process for workers' compensation

[14] See Taking the Bite Out of Insurance - Volume 1 - Investment Income in Ratemaking, Robert Hunter (1980), pages 5-17, for a history of the private passenger automobile insurance controversy.

[15] Ibid., Appendix F. (Jurisdictions studied include all 50 states, the District of Columbia and Puerto Rico.)

insurance.[16] In any other state that may give explicit consideration to investment income, the provision for underwriting profit (2.5%) has "been correspondingly adjusted upward to directly recognize the riskiness of insurance underwriting," according to the National Council on Compensation Insurance.[17] Thus investment income does not play a role which in any way affects the final rate paid by employers for workers' compensation insurance.[18]

Where did the 2.5% underwriting profit margin come from and what is the insurance industry's rationale today for its retention? Attached at Appendix 1 is a letter from the National Council on Compensation Insurance (NCCI) dated November 19, 1948, addressed to the Chairman of the National Association of Insurance Commissioners (NAIC) Worker's Compensation Committee.[19] Previous

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[16] Minnesota has just issued an order calling for reflection of investment income in workers' compensation insurance ratemaking in the future. Order for Modification of Matters Raised in the Petition and for Adoption of a Schedule of Rates for Use in Minnesota - Commissioner Michael D. Markman, April 21, 1981. (Reprinted in part in Appendix 4)

[17] Letter from Mr. F. Harwayne, Vice President and Director of Actuarial Research, dated March 3, 1981, attached at Appendix 1. This is confirmed in the insurance industry brief in the latest Minnesota Rate filing hearing (File No. INS-79-009-MG), Brief of Petitioners, Page 4, where it says: "...the 2.5% profit and contingency factor is in use in all states, except California which has a minimum rate law and in those...six states with monopolistic state funds."

[18] In Massachusetts, the impact of the reflection of investment income on final manual rates is to lower rates about 10% below what manual rates would have been had a 2.5% margin been used.

[19] The NCCI is the industry "cartel" charged with rate-setting and seeing that adherence with rates it establishes is carried out. NAIC is the national organization of Insurance Commissioners who meet semi-annually to deal with matters of public interest through draft legislation, exchange of information, etc.

to this time, the NCCI, which makes rates for all private insurers in all states either directly or through individual state rating bureaus, had used no underwriting profit for the workers' compensation line. The letter states:

> During the early history of workmen's compensation insurance, the insurance carriers in common with other financial institutions profited from existing opportunities and realized appreciable earnings from the investment end of the business...This situation has changed drastically within the past decade. Investment earnings now are at a greatly reduced rate from that which previously prevailed.

Thus it is clear that one of the factors that led the industry to propose and states to accept the 2.5% underwriting margin was the decline in investment margins in the 1940's.

NCCI Ratemaking Procedure

The NCCI does not mathematically reflect investment income in the ratemaking process.[20] Like most filers in most lines of insurance, the primary position of the NCCI is to leave investment income "behind the scenes" unless the state asks to see the numbers.

When asked, NCCI submits exhibits showing a calculation of investment income. Examples of these are contained in Appendix 3, where calculations for North Carolina and South Carolina are displayed. (The two procedures are identical, with the exception

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[20] Samples of the pertinent pages from rate filings made in Maryland and North Carolina (through the North Carolina Rate Bureau that follows the exact procedures of NCCI -- NCCI prepares the filing and supplies the actuarial witness for the Rate Bureau) are attached at Appendix 2. North Carolina is particularly important since its laws require the consideration of investment income in Workers' Compensation insurance ratemaking and, thus, its exclusion is evidence of insurer adamancy on this matter.

of the years of underlying data displayed and certain state data which was used.)

Critique of NCCI Approach

The NCCI approach is flawed in that it asks the reviewer to accept that investment income is not important to the workers' compensation insurer. The NAIC rejected this position in 1951, although few states have followed through on the NAIC position.[21]

In states where investment income has become an issue, the NCCI argues that the 2.5% underwriting profit was selected in light of the investment income opportunities. Does NCCI mean those opportunities available in 1949? An additional line of argument is that the investment account and the underwriting account are separate and should not be mingled on the grounds that mingling might affect the investment practices of some insurers. A final argument is that the use of investment income is a two-way street that could also lead to higher rates, i.e.,

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[21] The NAIC Subcommittee on the Profit and Contingency Factor to the workmen's compensation committee began its report as follows:

> The Committee believe that there should be included in the ratemaking formula, a factor for profit, but that the factor used should be demonstrated for each state by factual data to be such that it will produce only a just and reasonable return on investment capital and surplus devoted to Workmen's Compensation business, with due consideration being given to any special conditions of individual states and to investment earnings.

From NAIC Proceedings, 1951, page 384.

the 2.5% provision could be inadequate if investment income were reflected.

While the industry is correct that adjustments in profit rates may be appropriate if investment income is taken into account, there are techniques for the study of overall profitability that allow the review of underwriting and investment results in the same rate filing which would result in a more accurate setting of premium rates. Seventeen states, to some extent at least, follow this practice for private passenger automobile insurance, using any of several methods. The investment practices of individual companies are controlled to some degree by state investment restrictions anyway, and there is no apparent rush to unsound investments in those areas where investment income is required, such as in auto insurance. The "two-way street" argument may be correct, but it is no reason to refuse to change the status quo. The 2.5% underwriting profit margin may indeed prove too low (or too high) when tested against a reasonable estimate of overall need. Uncertainty about the effect of employing the best possible regulatory practice, however, is not a convincing argument for maintaining an outmoded method. Apparently, the NAIC agrees. In May 1973, the NAIC Task Force on workers' compensation ratemaking reported to the Rates and Rating Organizations Subcommittee that:

> This line was the first one where the relationship between investment earnings and the profit loading was clearly shown. In 1949, after three years in which investment earnings were at the lowest point in this century, the industry asked for a 2.5% profit loading to increase the total earnings from underwriting and investment to 7.4%. This was a very simple example of

> an increase in rates to offset a decrease in the return from investment. At present, investment earnings are higher than they were during the period before 1948 when the industry operated with a profit loading of zero.[22]

In recent months, the investment income question in workers' compensation insurance ratemaking has been studied in Arizona, Massachusetts, Minnesota, North Carolina and South Carolina.[23]

Including Investment Income in Ratemaking

The debate over investment income is divided into two main issues. One part of the debate principally concerns questions of measurement: What is the typical pattern of cash flow for a workers' compensation insurance policy? What are the funds available for investment? How should we measure the rate at which the funds can be invested? A second part of the debate concerns the use of investment income, however measured, in setting the allowed profit rate. This second issue concerns the appropriate standard for total profitability. Unless there is such a standard, there is no way of incorporating the measured income into rate-making.[24] Indeed, in some cases the calculation of investment income has played no role at all since, according to the NCCI, the target for total profit was simply raised to offset the allowance for investment income.

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[22] Report to NAIC (D1) Subcommittee, Rates and Rating Organizations, May 9, 1973.

[23] Pertinent sections of the Arizona and Minnesota studies are reprinted in Appendix 4.

[24] By analogy, if one were baking a cake, it would do no good to measure carefully out a cup of sugar if one had no idea as to the appropriate quantities of other ingredients.

In the following sections, we discuss the standard for total profitability first. We do so because we want to avoid letting problems of actuarial accounting complicate the process of defining the basic principles for rate of return adequacy in workers' compensation insurance. Once these principles are established we will return to the questions of measurement.

General Principles for Fair Profits

Insurance regulators have generally phrased their concern for profitability as a goal that rates should not be excessive, inadequate, or unfairly discriminatory. As a short-hand, we will refer to this goal as one of achieving "fair" profits.

One of the most frequently quoted standards for judging returns or profits in a regulated industry is the Hope decision:

> The return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[25]

The Hope decision is too general to be applied directly to insurance regulation, but it does suggest some principles for a practical standard. Of particular importance is its emphasis on (a) rate of return, (b) equity owners, (c) corresponding risk. The emphasis on the rate of return is important since the focus of insurance regulators has traditionally been on profit margins. In the following section we discuss the relationship of "margins" to "returns."

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[25] Federal Power Commission et al. vs. Hope Natural Gas Company, 320 U.S. 591, 603 (1949).

The emphasis on "equity owners" is important because there has been some confusion over whether return to equity or to total assets should be the proper focus of regulation. Finally, the emphasis on "corresponding risk" implies that the profitability of insurance cannot be judged in a vacuum -- that any proposed standard must be justified by some reference to the returns which investors can earn elsewhere in the financial markets.

As the Hope decision suggests, the ultimate standard for the adequacy of profits is the rate of return rather than the profit margin. The need to focus on the rate of return is spelled out in any basic text in financial management: a low profit margin combined with a high volume of business can produce profits which are just as satisfactory as high profit margins with low volume:

> Would it be better to have a 5 percent margin on sales and a total asset turnover of 2 times, or a 2 percent sales margin and a turnover of 5 times? It makes no difference -- in either case the firm has a 10 percent return on investment... If a grocery chain has a high turnover, and a chemical producer, with its heavy investment in fixed assets, a low turnover, would you expect to find differences in their profit margins on sales? In general, you would -- the chemical producer should have a considerably higher profit margin to offset its lower turnover. Otherwise, the grocery business would be much more profitable than the chemical, investment would flow into the grocery industry, and profits in this industry would be eroded to the point where the rate of return was about equal to that in the chemical industry.[26]

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[26] Weston, J.F. and E.F. Brigham, Managerial Finance. The Dryden Press, Hirsdal, Illinois, 1978; p. 43.

The Hope decision also suggests that we should be interested in the effect any profit margin has on returns to equity, that is, returns to common stockholders.[26a] As long as returns to equity are adequate, the industry will be able to hold its own in the competition for capital with other sectors of the economy. The emphasis on equity is important because the total assets of insurance firms exceed the funds supplied by stockholders. The remaining funds represent the value of premiums that insurance companies collect and hold in reserves in anticipation of future losses. These reserves play the same role as debt for the typical non-financial corporation: they are a source of leverage. In both cases, leverage represents the ability of stockholders to acquire assets in excess of the amount of capital they contribute. Again, any basic text in financial management recognizes the effect of leverage on the rate of return:

> We know, however, that leverage must be taken into account when considering the rate of return on net worth. If the firms in one industry have a somewhat lower return on total assets but use slightly more financial leverage than do those in another industry, both sets of firms may end up with approximately the same rate of return on net worth.[27]

[26a] The Hope decision does not address the adequacy of "profits" for mutual companies. In rate-making, no distinction is currently made since rates are determined for all firms in the market by the rate filing organization. In theory, profit regulation is irrelevant for mutuals since policyholders should receive as dividends any profits -- including excess profits, if any. This irrelevance assumes that the management of the mutual insurance company operates only with the interests of the policyholders in mind, and not in management's own interest.

[27] Ibid, p. 43.

A fair return to equity must take into account the opportunity the insurance firm has to invest these policyholder-supplied funds over the life of the insurance policy.

Virtually all the assets of property/casualty insurers are investments in financial instruments. The existence of leverage means that insurance companies' total returns are the sum of their underwriting results, the investment income from stockholder-supplied equity, and, finally, income from the additional assets purchased with policyholder-supplied funds. A fair return for insurance companies must make some accounting for the opportunity to earn income on policyholder-supplied funds. The greater this opportunity, the lower the required underwriting profit margin.

The opportunity for investment income goes a long way toward explaining why the average underwriting profit margin for stock insurers in all forms of property/casualty insurance was virtually zero over the period 1955 to date.[28] Profit margins in workers' compensation net of dividends averaged -2.7% for stock companies in the 1969-1978 time period, in spite of the statutory standard of 2.5%.[29] It is important to note that the number of firms in the U.S. writing property/casualty insurance increased steadily through this period. Apparently near zero underwriting profit margins overall and a small loss in workers' compensation still attracted new capital.

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[28] Bests' Aggregates and Averages, Property Casualty Edition, 1979, page 49.

[29] Ibid, page 148.

To summarize, in setting a standard for the profit margin we must begin with a standard for a fair return to equity and work backwards. There are two general approaches one can take to this problem. The first is to establish an empirical standard for return to equity, measure investment income, and then establish the underwriting profit margin as the required residual. We shall call this the "return to equity" approach. The second method (the Massachusetts Model) is less straightforward; we will take it up later.

The Return to Equity Approach

The key step in this method is to choose the target return to equity and then to work backwards to a "fair" profit margin. (Appendix 5 gives a precise algebraic treatment.) This choice depends on how risky we believe the equity of insurance companies is. One defensible standard is that the stock of insurance firms is as risky as the stock of the average firm in the U.S. The industry has, on occasion, used such a standard itself:

> Selection of a target return near the median for U.S. industry assumes that the insurance industry is of "average" risk. Although qualitative impressions of company and industry "riskiness" provide little or no significant guidance, there appears to be no qualitative evidence that insurance companies are significantly more or less risky than average. As pointed out in the introduction to this section,

> no generally agreed upon quantifiable measure of risk exists. By both the principal measures of risk proposed in the literature, "systematic" risk, as measured by beta, and total risk, as measured by variance of returns, the insurance industry is clearly near or above the median. Selection of a median rate of return is, therefore, appropriate and will be used in this filing.[30]

The measure of "systematic" risk referred to above is commonly called "beta" in the financial literature. We will discuss "betas" in more detail later, but they represent one of the measures of risk most widely used in finance. As the quotation indicates, the betas of non-life insurance companies as calculated by Value Line have been near the average for all companies traded on the New York Stock Exchange during the 1970's.

Although we discuss this result in more detail later, it may prevent some confusion if we note why insurance companies appear to have average risk. Apparently, insurance underwriting has relatively low risk because of the well-known effects of pooling many policies[31] and the effect of reinsurance to minimize adverse outcomes. In addition, insurance assets are invested in relatively safe investments. These two factors alone would lead us to expect below average riskiness. On the other hand, these relatively safe returns are converted, by the leverage we have already discussed, into returns to equity of about average risk. That is, when assets are greater than

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[30] Filing of the Massachusetts Automobile Rating Bureau in the hearings to establish 1981 rates, page 383.

[31] This is due to the fact that result approaches the underlying probability as the number of cases increases. This is not to suggest that property/casualty losses can be predicted with anything approaching the accuracy of life insurance losses, however.

stockholders equity, a small variation in investment results related to assets implies a larger percentage variation related to equity.

So far, our argument about the average riskiness of insurance companies has referred to multiple-line companies. A company which wrote only worker's compensation would be riskier than average (all else equal). This greater risk comes from the higher than average ratio of reserves to premiums for workers' compensation relative to their levels. A higher reserve to premium ratio creates greater leverage, and this in turn implies higher than average risk. Thus, an appropriate return standard for workers' compensation will be somewhat higher than that for the insurance industry as a whole.

When we compute the profit margin which produces a competitive return to equity, we see that the effect of leverage tends to be self-canceling. On the one hand, higher leverage increases the risk of insurance firms and thus raises the appropriate target return on equity. By itself this effect would call for a higher profit margin. On the other hand, that same leverage raises the opportunity for the firm to earn income on policyholder-supplied funds. Again, by itself, this effect means a lower profit margin is required to produce any given return to equity.

One important aspect of the return-to-equity approach is that fair underwriting profit margins should fall when the yields on insurance company investments rise. This is especially important in an inflationary environment. Inflation tends to raise the

yields on financial assets in which insurance firms invest reserves and their own surpluses. Rising inflation also requires an upward adjustment in the target rate of return. However, an insurance firm's own equity is typically less than half its reserves. Consequently higher yields have a larger effect on a firm's ability to earn investment income than on its target return. As a result, the fair underwriting profit margin must be adjusted downward. This has one distinct benefit. Since the loss and expense portions of the premium are adjusted for inflation, the contrary adjustment of the profit margin tends to stabilize year-to-year variations in rates.

When we have discussed problems of measurement we will use the return-to-equity method and actual data to evaluate the historical standard profit provision. We will see that it is much higher than a fair margin and that its excess over a fair margin has risen in recent years.

The Massachusetts Model

Background. There is another conceptual approach that is known as the Massachusetts Model because it was first adopted in that state. The concepts behind this approach were independently derived by a number of economists at about the same time.[32] They were incorporated into rate-setting procedures in Massachusetts by then-Commissioner, James M. Stone.

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[32] Munch and Smallwood, "Solvency Regulation on the Property. Casualty Insurance Industry", Rand, 1977. W. Fairley, Investment Income and Profit Margins in Property-Liability Insurance: Theory and Some Empirical Results," The Bell Journal, Spring, 1979; R. Hull, "Profit Regulation in Property-Liability Insurance", The Bell Journal, Spring, 1979.

The Massachusetts Model is not inconsistent with the return-to-equity approach. It represents a different view of the same problem. The distinguishing feature of the former is its attempt to estimate the risk of underwriting directly, through the Capital Asses Pricing Model (CAPM) and its use of the yield on U.S. Treasury bills to measure the imputed yields to measure the imputed yields to policyholder - supplied funds.

The Massachusetts Model does not start from an empirical target return on equity. Instead, it attempts to separate analytically the underwriting and investment functions of insurance and then estimate the risk of underwriting alone. The fair profit margin under this approach can be thought of as the sum of two components: (i) a risk premium for underwriting (which comes from the estimation just described), and (ii) an allowance for investment income on the reserves.

The risk premium is determined by application of the Capital Asset Pricin Model. The CAPM is the most widely used model of the relationship between risk and return in financial economics. It is based upon the notion that most investors have the opportunity to diversify their security holdings. When investors hold diversified portfolios, the risk associated with the variability in returns from any single stock is greatly reduced. Put very simply, the chance of poor performance by some stocks is likely to be canceled out by the unexpectedly good performance of others. No amount of diversification can eliminate <u>all</u> risk, however, since some events are likely to affect almost all stocks in the market in the same direction at once (for example, the

entire market may drop in response to pessimistic news about inflation). The variability that cannot be eliminated by diversification is known as "systematic risk."

The CAPM predicts that the return investors demand from any asset will depend on its systematic risk, not on its total variability. Systematic risk is measured by an asset's "beta." Beta is estimated by calculating the correlation of returns on some market index (like the Standard & Poor 500 index). The higher an asset's beta, the more likely it will perform well when the entire stock market does well and poorly when the entire market does poorly.

The Massachusetts Model recognizes that the systematic risk of an insurance company will vary with its choice of investments.[33] Consequently, it abstracts from investment choice by estimating the systematic risk of underwriting alone and by calculating an appropriate risk premium for underwriting alone. The derivation of this risk premium is discussed in more detail in Appendix 6. To summarize the finding of this Appendix, applying the Massachusetts model provides a profit margin of roughly 3.5%, before any allowance is made for corporate income taxes or investment income. The investment income which is subtracted from this figure is computed at the yield on Treasury bills.

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[33] Note that the CAPM does not require that insurance companies hold diversified portfolios. Rather, it describes the relationship between risk and return where insurance company stockholders have the opportunity to diversify their holdings.

The use of the Treasury bill yield to compute investment income is not only consistent with the CAPM, but also insures that the profit margin will not depend upon choice of investments by insurance companies. The logic of this position is that if insurance companies choose high-risk return investments, policyholders should be immune from that choice. If higher returns are, in fact, realized, stockholders are entitled to them. At the same time, if a riskier investment strategy produces losses, stockholders should bear those as well. The use of Treasury bill rates means that the Masschusetts model calculates the investment income available from a practically available, minimum-risk investment strategy.[34] Since Treasury bill yields vary from year to year, profit rates computed by the Massachusetts model will also vary from year to year.

Before we can make practical use of the Massachusetts or return-to-equity approaches, we need to confront a number of questions of measurement.

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[34] Typically, Treasury bills represent debt instruments with the minimum taxable yield, because of their U.S. Treasury backing and their short maturity. As this paper is written, however, yields on Treasury bills exceed those on longer-term bonds including some corporate debt. As a result the use of Treasury bill rates may appear to impute unreaslitically high investment income to insurance companies. However, an "inverted" structure of yields occurs when the financial markets expect future interest rates to fall (say, because inflation moderates). Given such expectations, investors who hold long-term bonds stand to experience a capital gain which holders of Treasury bills will not. Consequently, the existence of an inverted yield structure does not negate the role of Treasury bills as the debt instrument with minimum expected yield.

Measurement

In this section we discuss the measurement of the parameters that are required for calculating appropriate profit margins. Before we discuss specific variables, some general points are worth noting.

Average Experience. One such point is that information required for the practice of regulation will be in terms of industry averages (or perhaps state-wide averages, if available). This means that the profit margin set by regulators may not be "fair" forall firms -- it may be "excessive," for example, for those firms with exceptionally long-tailed pay-outs or low expense ratios and "inadequate" for those with exceptionally short pay-outs or high expense ratios. There is no solution to this problem as long as regulators set a single profit margin for all firms in the state market.

Use of National or State Data. We have tried to indicate below when significant differences in data can be expected to occur from state to state. Some data, however, will only be available on a nation-wide basis or for all lines of insurance. This is significant since rates are established on a state-by-state basis. Only national data are available for investment income, for instance. For the typical company, investments for all states and all lines are co-mingled so that direct measurement of investment income by state and by line is impossible except by relatively arbitrary accounting conventions. We are also limited to national sources for any figures based upon stock market data. Stock market data provides a quantifiable

and objective source of information about required rates of return or risk levels. It is reasonable to suppose, however, that the risk of workers' compensation (as viewed by investors) does not vary substantially from state to state. In any event such an assumption is equivalent to the specification by the traditional approach of a constant 2.5% profit margin in every state.

Use of Current or Retrospective Information. A third general consideration is whether rates should reflect reported results (retrospective in nature) or should be based on current opportunities and costs. The choice will primarily affect the target return to equity and the calculation of yields on investments. For example, insurance company portfolios contain bonds which were purchased years ago when interest rates were much lower than they are now. As a result, reported investment yields, those "embedded" in the investment portfolio, are well below yields currently available. This difference will not exist forever. If inflation falls, embedded yields will at some point become greater than current yields. Since inflation has driven up all returns in the economy, both the required return for insurance companies and available investment yields are higher than historical averages.

The advantages of retrospective data are (i) that the alternative, expected returns from current opportunities can only be estimated, not measured explicitly (ii) historical averaging tends to produce less variable profit margins.

Notwithstanding these advantages, economic and financial theory

would support rate setting based on current opportunities. Investors are interested in what they will earn from their currently held assets, not in past yields. No rational investor, for example, would invest in an insurance company whose expected return on equity was 10% when safer U.S. Treasury Bonds are offering 15%. Likewise, insurance companies may have taken capital losses from their investment in long-term bonds with 5% coupons, but current consumers of insurance are supplying premium dollars which can be invested at much higher rates.

The use of retrospective data also has the effect of throwing some of the investment risk onto consumers of insurance. Returns to insurance companies have some degree of insulation from inflation, since yields on their investments rise with inflation. Use of historical data may stabilize profit margins but it makes real (i.e., adjusted for inflation) returns and premiums more sensitive to inflation. The greater variability in premiums reflects the fact that policy-holders bear more investment risk when historical averages are used. In the example above, if investment income is computed at the embedded rate of 5%, policy holders are effectively bearing some of the cost of the insurance company's past investment decisions. Bearing risk, however, is precisely what stockholders are paid to do. If they choose not to they can always move into lower yielding safe assets which match the maturity of their liabilities.

Now to specific variables.

Return on Equity.

If we use the assumption that the insurance industry is of average risk for investment and underwriting activities combined,

then a reasonable standard for adequate rates of return might be the return to book equity of some general index like Standard and Poor's. As we have just noted, there will be a significant difference between required returns estimated from historical data and those which reflect current opportunities.

Table 3 gives the return on the Standard and Poor's 500 alongside of similar returns for property and casualty companies. As expected, the returns are similar.[35] Note, however, that recent rates are higher than those in the earlier 1970's for both series. This escalation reflects the rise in rates of return on all types of assets which has been produced, in turn, by the increase in the rate of inflation over the decade. Just as inflation was not steady over the period, neither was the trend in returns to equity. Consequently, it would be inappropriate to extrapolate a 1970's "trend" into the future. Instead one should recognize that recent rates are most likely to reflect current opportunities.

An even better method of capturing current opportunities is to recognize that equities have, over a long period, commanded a risk premium over safer investments. One way of reflecting that risk premium is to calculate the long-run average of the difference between returns on Treasury bills and equities, and then to add that difference to current yields on Treasury bills. This approach ensures that insurance company stockholders earn returns[34a] that are

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[34a] By "returns" we mean dividends plus capital gains.

[35] Table 3 appears on page 41a.

competitive -- when risk in taken into account -- with current alternatives. Also, since Treasury bill yields reflect expectations about inflation, this method captures the market's estimate of that part of the return which is just enough to compensate for future inflation.

As we note in Appendix 6, the long run difference between the return on stocks and yields on Treasury Bills has been about 9% over the period 1926 to 1979. If one adds this result to Treasury bill yields for January 1981, the result is a required return of 23.6%. This may seem large until one realizes that inflation offsets more than 10 percentage points of any return in 1980, but less than 2% on average over the period from 1950 to 1970.

Investment Yield.

There are two debatable issues with respect to investment yield. One is, again, whether to use historical versus current yield, which we have already discussed. We note only two points: (a) The NCCI's method is to calculate a five year average for investment return. This understates yields when rates are falling and overstates them when rates are rising. Over the cycle the result should be a "wash." As we have argued, however, use of current yields makes premiums and real returns to equity less variable with inflation. (b) Certainly, if current yields are used to compute an adequate return to equity, then current yields must be used to compute investment income from reserves.

In addition, there is the question of whether to calculate investment income using expected returns on the actual assets held

in company portfolios or to use some "minimum standard" like Treasury bills. In the Massachusetts Model investment income is calculated by the latter method. This is appropriate since under the CAPM the appropriate return on policyholder-supplied funds is the riskless rate of interest. As a further refinement in Massachusetts this riskless rate is calculated by using a weighted average of Treasury bill rates of different maturities where the weights are chosen to match the timing of the cash flow. A company investing in Treasuries would thereby be insulated from virtually all risk in its investments.

In contrast, when profit rates are derived from the return-on-equity approach, an estimate of yields related to actual investments must be made. The return-on-equity method assumes the industry as a whole has average risk. To work back to an appropriate profit margin it must use the investment income generated by the average investment portfolio. In practice, the use of actual portfolio composition can typically be reduced to the problem of finding an expected return for stocks and an expected return for bonds -- since these two investment types dominate the portfolio. Current yields for bonds are readily available. Assigning an expected return to stocks is more difficult, since we cannot observe the market's expectation of stock returns. A common error is to assume stock returns can be approximated by dividend yield. Such an approximation ignores the fact that over long periods capital gains have contributed as much, and often more, to stock returns than have dividends. Clearly, investors who currently hold stock expect more than the dividend yield (which averages in the 5-6% range) since corporate bonds pay twice that.

Perhaps the most attractive and consistent method of assigning a value for the expected return on equity investments is to use the target return on equity itself. As long as insurance companies hold broadly diversified portfolios of common stock, they should expect to earn a return on their investments (in such stock) equal to the return their own shareholders expect.

Premium-to-Surplus Ratio.[35] This ratio is one of the important determinants of an insurance firms' leverage. For all lines the ratio has been in the neighborhood of 2.0 in recent years, significantly higher than it was, say, two decades ago. Ratios for firms which specialize in worker's compensation are in the neighborhood of 2.0 as well. The NCCI argues that a "prudent" ratio of 1.0 should be used when factoring investment income into profits.[36] In their report to the Arizona Insurance Department, Peat, Marwick and Mitchell (p.16) note that ratios ranging between 1.0 and 4.0 have been espoused as "appropriate." The table below gives the actual premium to surplus ratio over time for all stock companies; as calculated from A.M. Best's, Aggregate and Averages.

Average over	Premium to Surplus Ratios
1950-59	1.62
1960-69	1.61
1970-79	2.14
1950-79	1.79

[35] "Surplus for an insurer is the balancing figure of its balance sheet. It is the excess of the assets over the sum of the liabilities and the capital, if any." Mobray and Blanchard, Insurance, 1955, page 383. Thus, it is equivalent to net worth on equity.

[36] Harwayne, Frank, Restatement of the Consideration of Investment Income in Workers' Compensation Insurance Ratemaking, 1978, page 20.

Cash Flow. The opportunities for investment income can be reduced to a single dimension: the average lag between premium receipts and loss and expense payments. The timing of the cash flow is likely to vary from state to state so that state-specific figures should be developed for use in rate-making.

The table below provides some estimates of the lag:

Source	Time in Years (approx.)
NCCI[37] (Countrywide)	.88
Massachusetts[38]	1.6
Arizona State Compensation Fund[39]	2.1
Pennsylvania[39]	2.4

Peat, Marwick, Mitchell (p.14) note that the NCCI figures are biased downward because of two errors in calculation: (1) the NCCI incorrectly assumes lump sum (as opposed to annuity) payments are paid without a lag (2) the NCCI uses the mid-point in time of the number of claims paid, understating the investment income to be earned on dollars of claims paid (since larger cases take longer to settle). The higher end of the range in the table also tends to be supported by other sources. In Appendix 7 we present our own calcuation from A.M. Best loss development data which indicates the average lag is for all mutual and stock companies is at least two years.

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[37] Calculated as 4.63% ÷ 5.25% from Harwayne, op. cit., pg. 5.

[38] Fairley, "Investment Income and Profit Margins in Property-Liability Insurance: Theory and Empirical Results," Bell Journal of Economics, Vol. 10, No. 1, Spring, 1979.

[39] Peat, Marwick, Mitchell, Examination of Workers' Compensation Insurance in Arizona, November, 1980.

Taxes. Two tax rates are required to determine profit margins: one for underwriting and one for investment income. No allowance for taxes is likely to be free from argument. Large insurance companies pay the standard 46% corporate rate on underwriting profits. However, in periods of high investment yields, the allowed underwriting profit margins can be negative. In that case, one must determine the implication of negative statuatory underwriting profits for the firm's tax liabilities. One option is to conclude that the firm can use the full amount of the statutory losses to offset positive profits elsewhere that would have been taxed at the 46% rate. In this case a pre-tax underwriting profit rate of, say, -1.85% should be converted into an after-tax rate of -1, i.e. [-1.85% x (1.0 - .46)], since the U.S. Treasury is effectively making up for some of the loss.

The assumption of a full offset is questionable, however. If firms are only writing insurance in the lines for which profits are regulated and margins are negative over several years, then there will not be positive profits elsewhere in the firm that are being taxed at the full corporate rate. At the same time, to assume no offset is certainly too conservative. At a minimum, the firm can use its negative underwriting profits to shield some of its investment income from tax. A reasonable approach, then, is to assume positive profits are taxed at 46%, while negative profits can be offset at the tax rate applied to investment income. We turn to the latter rate now.

Investment income is taxed at a variety of rates: 15% of dividend income is taxed at the full corporate rate (producing a

net tax of 6.9%); 40% of capital gains are taxed at the corporate rate (but these taxes are deferred until realized so their present value is less); interest income is taxed at the full corporate rate; and, finally, insurance portfolios have large amounts of tax exempt securities. This last category of securities bears an implicit tax burden because they earn lower yields than taxable bonds (in the last decade, around 30% less). In order to calculate the after-tax yield on the investment portfolio one must rely on a weighted average. In practice, the portfolio weights of the "average" firm can be used.

A convenient standard for the problem of measuring investment income and taxes on investment income is to use the yield on tax-exempt bonds. In recent years such bonds have comprised about 40% of insurance company investment portfolios. Because of their tax-exempt status, municipal and special revenue bonds earn lower yields than taxable bonds. As a result, insurance companies do not totally escape taxation of investment income by moving into these assets. They do represent, however, a minimum after-tax yield available for investment of reserves and surplus.

Empirical Evaluation of Profit Margins

We now present some estimates of returns to equity produced by various profit margins. As the preceeding discussion suggests, there will always be a subjective element involved in establishing an "adequate" return. Consequently, we present calculations made under a variety of assumptions and compare the results to several different standards. We must emphasize that these comparisons are rough calculations and must be interpreted as reflecting orders-of-

magnitude. They are useful, however, for making judgements about various profit margins, given the magnitude of the differences we report.

In this section we report only on averages over the period from 1950 to 1979 and in each of the three separate decades. By way of background the table below summarizes what was happening to reported investment returns and profit margins over this period:

Table 2: Investment Returns and Profit Margins, 1950 - 1979 (%'s)

Average Over	Reported Return on Stock Company Assets	Treasury Bill Rate	W.C. Underwriting Profit Margin
1950-59	5.61%	1.9%	3.12%
1960-69	4.34	3.9	3.24
1970-79	5.59	6.3	-1.72
1950-79	5.18%	4.0%	1.55%

A clear distinction must be made between comparisons based on "accounting" returns and those based on "market" returns. "Accounting" returns rely heavily on retrospective information while the latter reflect current opportunities. For example, for non-insurance firms such data include depreciation and cost of goods sold based on historical rather than current cost. For insurance firms accounting returns reflect embedded investment yields. Unless the discrepancies between market and accounting returns are the same across industries comparisons based on accounting data will be subject to error. Nevertheless, accounting returns are often used to assess the adequacy of profits. Consequently, we present comparisons based on both accounting and market returns.

Table 3 presents the former as averages over the last three decades of yearly calculations:

Table (3): Comparisons Based on "Accounting" Returns

Average over	Return to book equity S & P 400	Return to book equity stock Insurance Co's.	Return from 2.5% margin	Return from 2.5% margin less 4.7% dividend	Return from actual margin and reported investment return
1950-59	12.7%	12.3%	18.2%	13.0%	18.4%
1960-69	11.5	6.9	15.3	10.3	16.1
1970-79	13.2	14.3	24.9	17.9	18.0
1950-79	12.5%	11.2%	19.4%	13.7%	17.5%

Column (1) gives the return to book equity of the Standard and Poor 400* while column (2) gives the return to equity, calculated from A.M. Best data, for all stock property/liability insurance companies. Column (3) presents an estimate of the return to equity produced by the traditional 2.5% profit margin and the investment yield reported in company financial statement. Column (4) repeats Column (3) except that the 2.5% profit margin for each decade has been reduced by subtracting the average dividend to policyholders over the period 1971 to 1978 (the only period for which we have data). Column (5) is the return produced by actual margins and the reported investment return. In calculating these returns we computed taxes on investment return using the tax rates applicable to the various types of securities held, weighted by their proportion in total investments. Underwriting taxes are calculated at the normal corporate tax rate for Column (3) and the value of the tax shield for the negative margins in Columns (4) and (5) is calculated as the lost return from investing in tax-exempts as opposed to U.S. Government bonds.

In all cases, where we calculate returns from some assumed profit rate, we have used the actual industry-wide ratio for premiums to surplus and a 2:1 ratio for reserves to premiums.

Over the 30 year period the 2.5% margin produces average returns which are higher than either the S & P 400 return or the average return to stock insurance firms. Looking at the results decade by decade reveals an interesting pattern. In the 1970's as investment yields and leverage began to rise, the discrepancy between returns produced by this constant profit margin and our two standards

* The S & P 500 is a more common stock market index but we were unable to get a book return series for it.

of comparison widens dramatically.

In Column (4) of Table 3 we can see that returns would, on average, still have been higher than either standard of comparison if the industry's profit margin had been the traditional rate less a 4.7% dividend. The discrepancy narrows considerably, however. On the other hand, Column (5) suggests that actual profit margins were higher than the 2.5% rate less a 4.7% dividend, and that returns to equity were, consequently, significantly above those in Columns (1) and (2).

Table 4 presents similar comparisons based on market data; that is, in every year we calculated returns based on opportunities then available in the securities' market.

Table (4): Comparisons Based on Market Returns

Average over	Treasury bill yield plus 8.8%	Return from 2.5% margin less 4.7% dividend	Return from actual margin and tax-exempt yield	Return under Massachusetts Model
1950-59	10.7	8.4	13.8	11.8
1960-69	12.7	13.6	19.3	11.5
1970-79	15.1	27.6	27.8	17.2
1950-79	12.8	16.5	20.3	13.5

Column (1), our standard of comparison, is the long-term average excess return in the market (8.8%) added to the then currently available Treasury bill rate for each year. We use this as a proxy for the expected return on the average share in the stock market. (See Appendix 6 for its source).

We have argued above that a firm writing only worker's compensation would be riskier than the typical multiline company. Appendix 6 provides a rough estimate from the CAPM that the expected return could be anywhere between 3.0 and 4.6 percentage points higher for worker's compensation than for the industry as a whole. Appendix 6 also notes that the relative risk of insurance (including worker's compensation) was lower in the 1950's and 1960's because of lower premium to capital ratios. The estimates (again rough) in Appendix 6 would call for a counter-balancing reduction in the expected return on equity, because of that lower risk, of somewhere between 2.1 and 3.3 percentage points during the 1950's and 1960's. These risk adjustments should be kept in mind when comparisons are drawn in Table (4).

In Columns (2), (3) and (4) we present different average returns to equity for worker's compensation. The averages are, again based on annual calculations where after-tax investment income is imputed at each year's municipal bond yield, thus reflecting current market opportunities. Note that this will probably tend to overstate the investment opportunities. In the 1950's since tax exempt bonds were a small proportion of total assets and the tax-exempt market itself was small by today's standards. Taxes on underwriting income, again, are calculated at the corporate tax rate when they are positive and the tax shield is calculated as the lost yield on tax-exempts relative to U.S. Governments.

Column (2) calculates returns produced by the 2.5% margin less a 4.7% dividend. These returns are lower than Column (1) in the 1950's but become significantly higher in the 1970's. Column (3) gives returns produced by the actual underwriting profit margin

net of dividends. These figures are much greater than our measure of expected return on the stock market index, even if we make the adjustments discussed above for the greater risk of a company writing only worker's compensation. The fourth column is the return produced by the Massachusetts model. We present this return in Table (4) because the model derives its profit rate from current investment opportunities. Column (4) comes closer to our standard of comparison than any of the previous calculations, although they are on the low side when the adjustments mentioned above are added.

What do we learn from all these return calculations? First, we emphasize again that these are not fine-tuned estimates of adequate returns. Given the inherent uncertainty of financial markets any claim to great precision would be misleading. Nevertheless, these figures represent a reasonable basis for making some judgments about various profit margins, given the magnitude of the differences we report.

To summarize, we can see that the traditional margin produces returns much higher than our measures of alternative opportunities for investors. Even when we deduct a dividend of 4.7% the traditional margin is far higher in the 1970's (recall that the 4.7% average dividend is from 1970-78; we have no way of knowing if earlier dividends were that high). A second observation is that the actual profit margins, although often below the traditional rate, produce very high returns as well. Finally, we note once more that the Massachusetts model produces equity returns which seem close to, although somewhat below, current alternative opportunities.

Conclusions

There are serious problems with the use of the traditional 2.5% profit margin for worker's compensation insurance. A profit margin, by itself, is never a sufficient measure of true profitability. "Adequate but not excessive" profits can be determined in a meaningful way only when the standard of comparison is a return to equity--the reward to stockholders for putting their capital at risk.

Because it uses a constant profit margin, the traditional method fails to reflect the ability of insurance companies to earn investment income on policyholder supplied funds. This opportunity will change over time as investment yields fluctuate. Consequently, whatever profit margin was "correct" in the 1950's is not likely to be correct today. Further, different lines of insurance offer different investment income opportunities, due to differing cash flow patterns. "Long tail" lines of insurance generate more investment income. Even within a single line of insurance, there is variance by state in claims payout patterns. Using formula (1) in Appendix 5, a "typical" company which earned the municipal bond yield on its investment portfolio in 1959 would have enjoyed a return to book equity equal to the Standard and Poor 400 at an underwriting profit margin of -3.5%. In 1979 the same would have been true at a margin of -11%.

In fact, we have seen that realized underwriting profit margins declined substantially in the 1970's compared to the average of the two previous decades. This suggests that competition forced premiums down in spite of the ostensible profit margin built into the rates. This fact prompts the question of whether one ought to be

concerned with profit margins in worker's compensation at all. If competition works sufficiently well, then we can assume profit rates are just adequate and regulation is irrelevant. Indeed, while consumer information problems may impede competitive forces in personal lines, consumers of worker's compensation (businesses) should find it worth their while to engage in the kind of "shopping" that makes competition work well. Worker's compensation purchasers are sophisticated compared to personal line shoppers.

However, we are not prepared to go so far as to assume regulation has had no effect on profits or that profits have been at a competitive level. The rate of return calculations, while not definitive, suggest that profit margins did not fall as far in the 1970's as one would expect in this industry. The fact that competition put pressure on prices set jointly does not mean that rates were at the competitive level in a market with an anti-trust exemption. Even if excess profits had been eroded completely, the effect of higher-than-adequate profit margins in workers' compensation insurance ratemaking is not benign. In part, the erosion of profits in a regulated market comes about by inefficient forms of competition: higher than optimal service levels, cross-subsidization in "package" deals, unnecessary moves to self-insurance, and so on.

We find that the potential returns generated by the use of the traditional 2.5% underwriting profit margin are excessive given today's investment opportunities. Negative underwriting profit margins such as those adopted in Massachusetts or Minnesota are consistent, however, with the research we have undertaken into the question of reasonable overall profit margins.

NCCI National Council on Compensation Insurance

1 Penn Plaza
New York, New York 10119
Tel. (212) 560-1000

Frank Harwayne
Vice President
Director of Actuarial Research

March 3, 1981

Mr. Robert Copeland, Director
Office of Health and Disability
U. S. Department of Labor
Washington, D. C. 20210

Dear Mr. Copeland:

Thank you for your letter of February 12, 1981.

In accordance with your request, we are sending you, under separate cover, a current set of manuals.

With regard to the states wherein the National Council on Compensation Insurance acts as a ratemaking organization, the provisions you have outlined for profit or contingency is 2.5%. In a few jurisdictions, the ratemaking process may directly reflect income expected from investment and in those situations the provisions for profit or contingency has been correspondingly adjusted upward to directly recognize the riskiness of insurance underwriting.

Very truly yours,

Frank Harwayne

Frank Harwayne
Vice President and Director
of Actuarial Research

FH:MN

NATIONAL COUNCIL ON COMPENSATION INSURANCE

MARYLAND

EXHIBIT - II

Allowances for Expenses, Taxes, Profit and Contingencies

Underlying the proposed rates allowances of 21.2% of standard premium for company expenses, 2.5% of standard premium for profit and contingencies, 2.6% of standard premium for taxes, coupled with 11.5% of expected losses for loss adjustment expenses, plus an expense constant on premiums.

The expense provisions are listed below by expense category. It should be noted that the expense provisions in the manual rate are established for the majority of insureds who are not eligible for the premium discount program and perhaps are not even eligible for experience rating.

The premium discount program is a mandatory set of discounts which are based upon the fact that some expenses as a percentage of premium decrease as the premium increases. The expenses affected are the general expense and acquisition expense categories.

The result is that the provisions in the premiums after discounts, namely the net premium, are less than that in the manual premium. It is the net premium which the insured will pay. The provisions in the net premium based upon a distribution of insureds by size of premium in your state may be found on page 2 of this exhibit.

The items comprising the expense allowance in manual rates are as follows:

	Item	Present	Proposed
(1)	Acquisition and Field Supervision	15.0%	15.0%
(2)	General Expenses	6.2	6.2
(3)	Total for Company Expenses (1)+(2)	21.2%	21.2%
(4)	Taxes, Licenses and Fees other than Federal Income Tax		
	(a) Premium Tax	2.0	2.0
	(b) Miscellaneous Tax	.6	.6
	(c) Insolvency Fund	.7	-
(5)	Profit and Contingencies	2.5	2.5
(6)	Total for Company Expenses, Taxes and Profit and Contingencies (3)+(4)+(5)	27.0%	26.3%
(7)	Permissible Loss and Loss Adjustment Ratio	73.0	73.7
	Loss Adjustment Expense:		
(8)	Related to Premium	7.5	7.6
(9)	Related to Losses	11.5	11.5
(10)	Total Expense Allowance Related to Premium (6)+(8)	34.5%	33.9%
(11)	Expense Constant	$35.00	$35.00

NORTH CAROLINA

EXHIBIT - III

Allowances for Expenses, Taxes, Profit and Contingencies

Underlying the proposed rates allowances of 21.2% of standard premium for company expenses, 2.5% of standard premium for profit and contingencies, 5.1% of standard premium for taxes, coupled with 11.5% of expected losses for loss adjustment expenses, plus an expense constant on premiums.

The expense provisions are listed below by expense category. It should be noted that the expense provisions in the manual rate are established for the majority of insureds who are not eligible for the premium discount program and perhaps are not even eligible for experience rating.

The premium discount program is a mandatory set of discounts which are based upon the fact that some expenses as a percentage of premium decrease as the premium increases. The expenses affected are the general expense and acquisition expense categories.

The result is that the provisions in the premiums after discounts, namely the net premium, are less than that in the manual premium. It is the net premium which the insured will pay. The provisions in the net premium based upon a distribution of insureds by size of premium in your state may be found on page 2 of this exhibit.

The items comprising the expense allowance in manual rates are as follows:

	Item	Present	Proposed*	Proposed
(1)	Acquisition and Field Supervision	17.5%	17.5%	15.0%
(2)	General Expenses	8.0	8.0	6.2
(3)	Total for Company Expenses (1)+(2)	25.5%	25.5	21.2%
(4)	Taxes, Licenses and Fees other than Federal Income Tax			
	(a) Premium Tax	4.0	4.0	4.0
	(b) Miscellaneous Tax	.6	.6	.6
	(c) Stock Assessment	1.0	.5	.5
(5)	Profit and Contingencies	2.5	2.5	2.5
(6)	Total for Company Expenses, Taxes and Profit and Contingencies (3)+(4)+(5)	33.6%	33.1%	28.8%
(7)	Permissible Loss and Loss Adjustment Ratio	66.4	66.9	71.2
	Loss Adjustment Expense:			
(8)	Related to Premium	6.8	6.8	7.3
(9)	Related to Losses	11.5	11.5	11.5
(10)	Total Expense Allowance Related to Premium (6)+(8)	40.4%	40.4%	36.1%
(11)	Expense Constant			
	Risks Under $200 Premium	$15.00	$15.00	$35.00
	Risks Between $200 and $500 Premium	$10.00	$10.00	$35.00
	Risks Over $500 Premium			$35.00

*Not Including Revised Expense Program

31-5/80

MEMORANDUM

Investment Income - NORTH CAROLINA

This memorandum gives consideration in making rates to investment income from the unearned premium and loss reserves. It should be noted at the outset that such investment income has been considered in the making of workers' compensation rates. When the allowance of 2.5% for profit and contingencies was selected, the 2.5% figure contemplated that there would be income from these other sources.

If investment income from the unearned premium and loss reserves is relevant, the most that the law requires is that such income be considered together with the anticipated return from underwriting, in the case of workers' compensation 2.5% of premium, to determine whether the combined return from both sources of income is a reasonable one.

Underwriting and investments are two separate and distinct operations of casualty insurance companies, and two separate and distinct opportunities for profit. Underwriting profits represent the residue, if any, remaining after losses and expenses incurred during a given period are subtracted from premiums earned during that same period. Investment profit, however, is derived from the intelligent investment of funds in the possession of the carriers, to the extent that it is prudent for the carriers to make such funds available for investment. In practice these two functions are handled as completely separate operations of the insurance company. Their distinctness is well recognized in the NAIC Annual Statement blank. In the Statement of Income portion of the Under-writing and Investment exhibit, the carrier is required to make a separate accounting of underwriting income and investment income.

In spite of the traditional and well recognized separability of these two operations, the view is sometimes advanced that underwriting data and investment income should somehow be intermingled in the rate-making procedure. Investment income aggregates are not ratemaking experience data and should not be treated as such; neither should investment income be used as an automatic reduction from the margin for underwriting profit and contingencies or any other element of workers' compensation rates with no consideration given to the reasonableness of the pricing program in its entirety, including the provision for underwriting profit and contingencies. That the statutory scheme does not call for any such conclusion would seem to allow for little argument. Why such a conclusion should in no event be arrived at merits the following discussion.

A second reason why there should be no attempt to bring investment dollars into the mechanics of ratemaking is the likely effect upon the investment policy of individual companies. The investment policy a particular company should adopt depends on many factors including the relative size of its capital and surplus account. If a high level of

surplus is available, higher yield from more volatile investments may safely be sought. Introducing an investment income element into the rate formula would tend to induce some companies to shift from more conservative investments, to the detriment of the public interest in maintaining high standards of solvency. A company which feels it needs to keep an appreciable portion of its reserves for workers' compensation insurance either in the form of cash or comparatively low-yield investments, should not be discouraged from so doing by the ratemaking procedure.

A third reason is that a drop in investment dollars because of fluctuating economic conditions must of necessity be made up by increased rates under this theory. Coupled with the incentive toward more speculative investing alluded to above, there may very well be an aversion to a "two-way" operation on the inclusion of investment income; and, yet, to conduct the program on any other basis would tend to produce a pricing bias against the carriers.

A fourth reason is that if investment income earned by insurance companies were taken into account in the mechanics of workers' compensation insurance ratemaking, the present provision of 2.5% of premium for profit and contingencies would be completely inadequate. The 2.5% profit and continencies factor produces, at best, marginal rates today. Obviously, if the modest 2.5% profit and contingencies factor were reduced or eliminated it would make it increasingly more difficult to attract capital to this business.

Finally, consideration would have to be given in the ratemaking procedures to the particular type of investments properly attributable to reserve accounts. Since these accounts generally represent liabilities that must be met promptly, the assets represented by them would generally be invested in highly liquid low-yield securities, or held as cash or its equivalent. Very probably the reserve funds are invested differently for the several lines of insurance depending on the particular company's relative volume by line and the degree of liquidity necessary.

* * *

Granted that the investment return is not properly to be included in the ratemaking procedure, can the reasonableness of insurance rates nevertheless be given "due consideration" or otherwise evaluated in the light of investment income? The answer is that it can be. As stated earlier, the return from investment of unearned premium reserves and the loss reserves can be reviewed with the anticipated underwriting return to determine the reasonableness of the overall return from both operations. The attached exhibits show our estimate of the amount of investment income from the reserves during the most recent available periods. Note that the total return from both reserves for the latest available periods (before Federal Income Taxes) is 3.88% (.72% + 3.16). This, combined with the targeted 2.5% return from underwriting would produce (if the profit and contingencies allowance were earned) a total return from both underwriting and investments (before Federal Income Taxes) of 6.38% (3.88% + 2.5%), or an estimated total net return (after

Federal Income Taxes) 4.53% (3.23% + 1.3%).

The companies writing workers' compensation insurance are not monopolistic utilities. There are a sizeable number competing for the business in every state. In addition to competing in final premium charged, they are competing strenuously with each other in the service and attention which they render to policyholders. Therefore, they are entitled, even though regulated, to that profit on sales which prudent management feels is necessary for the long-run good of the business.

With this background, it is evident that the underwriting profit and contingencies allowance (if earned), plus the investment income on reserves adds up to a most modest income for workers' compensation insurance carriers. Otherwise expressed the rates meet all of the standards set forth in the rating law, and due consideration has been given to investment income from unearned premium reserves and loss reserves, as well as all other factors deemed relevant.

NATIONAL COUNCIL ON COMPENSATION INSURANCE NORTH CAROLINA

ATTACHMENT I

Investment Income on Unearned Premium Reserves

The attached exhibits represent estimates of investment income from unearned premium reserves for stock carriers based on countrywide data covering Calendar Years 1977 and 1978.

An explanation of certain of the items in the exhibits follows. The items are assigned the same number as the lines on the exhibit.

1, 2 - These figures were obtained from Best's Fire and Casualty Aggregates and Averages. (Hereinafter referred to as Best's).

4(a) - It is estimated that workers' compensation premiums are remitted on the average approximately 105 days after effective dates of policies. This is 7/24 of a year, and, thus, a .292 reduction factor is applied to the mean unearned premium reserves.

The average delay in remission of premiums for all fire and casualty lines combined is approximately 60 days. This is derived from the ratio of premium balances to net premiums written for stock companies, as shown in Best's, together with a small increment for the non-admitted premium balances over 90 days due. In workers' compensation insurance premiums are actually collected by the carriers at a much slower rate than that for most other lines. This is due to the fact that virtually all workers' compensation policies are written on a payroll audit basis, with either a single audit made after the termination of the policy or interim audits made during the policy term. Of necessity, there is usually about a two month delay in making audits, and on balance the results of audits show a substantial excess of additional premium due over premium returns.

It is estimated, therefore, that there is an additional 45 day delay in remitting workers' compensation premiums over the average 60 day delay applicable to all lines combined.

4(b) - Deduction is taken here of certain items of expense which must be prepaid by the carrier out of its own resources since at inception 100% of the premium is allocated to the unearned premium reserves. The amount of the deduction has been reduced to recognize the delay remission of premium referred to in 4(a) above. The figures cited below (except the Allowance for Profit and Contingencies) were obtained from the Insurance Expense Exhibit compilation prepared by the National Council and distributed to all Insurance Departments:

Item	1977	1978
Commission	8.4%	8.4%
Other Acquisition	2.0	1.8
50% of General Expense	3.0	3.05
Taxes	3.8	3.9
Allowance for Profit and Contingencies	2.5	2.5
	19.7%	19.65%

These deductions for the Accounting Method are, in our opinion, conservative for the following reasons:

a. The rates of Commission and Other Acquisition expenses actually incurred and employed in the calculation reflect such expenses from all sized risks, including a substantial volume of business derived from the larger insureds. With respect to the larger risks, the rates of commission are lower and the greater proportion of the premium is developed on interim audits. These audits are made usually monthly or quarterly and when billed represent earned premium in full. Unearned premium reserves are developed only from deposit premiums and additional premiums charged by endorsement during the policy term. Since the smaller risks are not the ones normally using the interim audit arrangement, it can be assumed that a great proportion of the premiums going into the unearned premium reserve is derived from the smaller risks with their relatively higher rate of commission. Thus, it is a fair assumption that the many thousands of risks with premium under $1,000 require expenditure of 17.5% for commissions and other acquisition at inception (this is the allowance for Acquisition applicable to the 1st $1,000 of premium) and the deposit premium from these same risks must be allocated to the unearned premium reserve without deduction for this expense.

b. Concerning interim audits, this method of operation is the equivalent of a negative investment income. First, the premium is not developed until the exposure to loss has gone by and, second, there is a 60 day delay in remitting the premium through the agent. What this means is that as respects any one risk, the payments of any loss is coming from company surplus and any recovery to surplus will not take place until several months later when the interim audited premiums are remitted.

c. Only 50% of the General Expense item has been assumed as applicable at inception of the policy. This is to recognize that payroll audit and the preparation of unit cards represent expenses incurred after expiration of the policy. It could be reasoned, however, that these are offset somewhat by the expenditure of the allowance for inspection for this expense starts when business is written. It is quite probable that more than 50% of the General Expense is absorbed at or near the inception of the policy.

8-The average net rate of return is the five-year average ratio of investment income to all assets available for investment and was based on data for stock companies from Best's. The figure was reduced for investment expense which is the five-year average ratio of investment expenses incurred to all assets available for investment and also was based on figures from Best's.

10 - This is derived from net earned premium aggregates for stock companies as reported in Best's, converted to a standard premium basis by application of the ratio of standard to net premium from National Council calendar year experience.

12 - The Federal Income Tax used here was calculated by applying the Federal Tax rates to the distribution of assets for stock companies appearing in Best's.

STOCK COMPANIES - WORKERS' COMPENSATION

INVESTMENT INCOME ON UNEARNED PREMIUM RESERVES
(1978 Countrywide Data, Last Three 000 Omitted)

1.	Unearned Premium Reserve - 12-31-77	1,744,457
2.	Unearned Premium Reserve - 12-31-78	2,153,057
3.	Mean Unearned Premium Reserve in 1978	1,948,757
4.	Deductions	
	*(a) Delayed Remission of Premiums .292 x (3)	569,037
	**(b) Accounting Methods	312,939
5.	Net subject to Investment (3)-(4a)-(4b)	1,066,781
6.	Average Rate of Return++	6.17%
7.	Investment Expense++	.34%
8.	Average Net Rate of Return (6)-(7)	5.83%
9.	Investment Earnings on Net Subject to Investment (5)x(8)	62,193
10.	Standard Earned Premium for 1978	8,480,456
11.	Average Rate of Return as Percent of Earned Premium (Prior to Federal Income Tax) (9)÷(10)	.73%
12.	Average Rate of Return after Federal Income Tax (83.2% x (11))+	.61%

*To reflect delay in remitting premium to companies

**Adjusted for the fact that commission and taxes are incurred upon receipt of premium. ((.197(3) - (4a) (.123)

+100.0% - 16.8% = 83.2%
++Based on 5 year average, 74-78

STOCK COMPANIES - WORKERS' COMPENSATION

INVESTMENT INCOME ON UNEARNED PREMIUM RESERVES
(1977 Countrywide Data, Last Three 000 Omitted)

1.	Unearned Premium Reserve - 12-31-76	1,510,391
2.	Unearned Premium Reserve - 12-31-77	1,744,457
3.	Mean Unearned Premium Reserve in 1977	1,627,424
4.	Deductions	
	*(a) Delayed Remission of Premiums .292 x (3)	475,208
	**(b) Accounting Methods'	262,627
5.	Net Subject to Investment (3)-(4a)-(4b)	889,589
6.	Average Rate of Return++	5.91%
7.	Investment Expense++	.35%
8.	Average Net Rate of Return	5.56%
9.	Investment Earnings on Net Subject to Investment (5)x(8)	49,461
10.	Standard Earned Premium for 1977	6,955,121
11.	Average Rate of Return as Percent of Earned Premium (Prior to Federal Income Tax) (9)÷(10)	.71%
12.	Average Rate of Return after Federal Income Tax (82.7% x (11))+	.59%

*To reflect delay in remitting premium to companies.

**Adjusted for the fact that commission and taxes are incurred upon receipt of premium. (.197(3) - (4a) (.122))

+100.0% - 17.3% = 82.7%
++Based on 5 year average, 73-77

ATTACHMENT - II

Investment Income on Loss Reserves - NORTH CAROLINA

The attached exhibit presents an estimate of investment income from loss reserves based on a method of tracing payments of losses during the time premium from transactions giving rise to such losses is in the possession of the carriers. It is a method which is based on the use of actuarial statistical data showing the distribution of losses by type of injury and the average duration of cases by type of injury. For convenience, the calculations are expressed in terms of the amount of investment income per $10,000 of losses.

An explanation of certain of the columns on the exhibit follows:

Column (2) represents North Carolina distribution of incurred losses by type of injury obtained from unit report summary data.

Column (4) represents the percentage of losses by type of injury which are estimated to be paid in installments and not paid in a lump sum. It is the best estimate of insurance company actuaries that all permanent partial non-schedule amounts and 50% of the schedule amounts are paid on an installment basis. The figures in column (4) for permanent partial cases are derived according to the relative weight of non-schedule and schedule losses in each type of injury category. With respect to the medical portion of permanent total and major permanent partial cases, see notes (a) and (b) at the bottom of the exhibit.

Column (6) has been obtained by dividing total incurred losses by type of injury for policy period 1976-1978 by the average annual benefit by type of injury for these periods. The average duration of medical losses in major permanent partial cases is estimated to be 75% of the duration of major permanent partial indemnity losses. The average duration of medical losses in minor permanent partial cases is estimated to be 50% of the duration of minor permanent partial indemnity cases.

Column (7) is the investment income at 5.83% per annum from the amounts in Column (5) for the duration indicated on Column (6). The Column (5) amounts will decrease each year as a result of payouts to injured workers. Note, however, that under the National Council's Unit Statistical Plan death and permanent total cases involving life pensions must be reported on a present value basis at 3-1/2% interest. As respects these cases the investment income figures in Column (7) are overstated.

Line 11. The Federal Income Tax used here was calculated by applying the Federal Tax rates to the distribution of assets for stock companies appearing in Best's.

INVESTMENT INCOME BASED ON $10,000 OF EXPECTED LOSSES - NORTH CAROLINA

(1) Type of Injury	(2) % of North Carolina Losses	(3) Col.(2) Expressed In Dollars	(4) % of Col.(3) Not Paid In Lump Sum	(5) Amount Not Paid In Lump Sum (3)x(4)	(6) Average Duration Of Case (Years)	(7) Investment Income (Based On 5.83% Rate of Return)
Death (Ind. Only)	6.59	659.00	98.90	651.75	8.6265	140.07
Permanent Total (Ind.)	1.06	106.00	100.00	106.00	11.7494	29.05
Permanent Total (Med.)	1.22	122.00	(a)	122.00	11.7494	16.19
Major P.P. (Ind.)	24.45	2,445.00	67.52	1,650.86	4.1578	203.51
Major P.P. (Med.)	8.02	802.00	(b)	802.00	3.1184(c)	41.03
Minor P.P. (Ind.)	14.69	1,469.00	72.34	1,062.67	0.7373	38.64
Minor P.P. (Med.)	8.23	823.00	100.00	823.00	0.3687(d)	18.14
Temporary Total (Ind.)	12.37	1,237.00	100.00	1,237.00	0.1242	18.93
Medical (Death, T.T., non-comp., and contract)	23.37	2,337.00	-0-	-0-	-0-	-0-
TOTAL	100.00	10,000.00	xx	xx	xx	505.56

8. Permissible Loss Ratio (Excl. Loss Adj.)	.626
9. Standard Premium $10,000/(8)	15,974
10. Investment Income from Loss Reserves as a Percent of Premium Prior to Federal Income Tax : Sum (7)/(9)	3.16%
11. Average Federal Income Tax Rate	16.8%
12. Investment Income from Loss Reserves as a Percent of Premium after Federal Income Tax : (10)x[100%-(11)]	2.63%

(a) 50% of Permanent Total Medical Losses are paid in first year, 20% in second year, and 30% over remaining duration.
(b) 90% of Major Permanent Partial Medical Losses are paid in first year, and 10% over remaining duration.
(c) Major Permanent Partial Medical duration is 75% of Major Permanent Partial Indemnity Duration.
(d) Minor Permanent Partial Medical duration is 50% of Minor Permanent Partial Indemnity Duration.

NATIONAL COUNCIL ON COMPENSATION INSURANCE

M E M O R A N D U M

Investment Income - SOUTH CAROLINA

This memorandum gives consideration in making rates to investment income from the unearned premium and loss reserves. It should be noted at the outset that such investment income has been considered in the making of workers' compensation rates. When the allowance of 2.5% for profit and contingencies was selected, the 2.5% figure contemplated that there would be income from these other sources.

If investment income from the unearned premium and loss reserves is relevant, the most that the law requires is that such income be considered together with the anticipated return from underwriting, in the case of workers' compensation 2.5% of premium, to determine whether the combined return from both sources of income is a reasonable one.

Underwriting and investments are two separate and distinct operations of casualty insurance companies, and two separate and distinct opportunities for profit. Underwriting profits represent the residue, if any, remaining after losses and expenses incurred during a given period are subtracted from premiums earned during that same period. Investment profit, however, is derived from the intelligent investment of funds in the possession of the carriers, to the extent that it is prudent for the carriers to make such funds available for investment. In practice these two functions are handled as completely separate operations of the insurance company. Their distinctness is well recognized in the NAIC Annual Statement blank. In the Statement of Income portion of the Under-writing and Investment exhibit, the carrier is required to make a separate accounting of underwriting income and investment income.

In spite of the traditional and well recognized separability of these two operations, the view is sometimes advanced that underwriting data and investment income should somehow be intermingled in the ratemaking procedure. Investment income aggregates are not ratemaking experience data and should not be treated as such; neither should investment income be used as an automatic reduction from the margin for underwriting profit and contingencies or any other element of workers' compensation rates with no consideration given to the reasonableness of the pricing program in its entirety, including the provision for underwriting profit and contingencies. That the statutory scheme does not call for any such conclusion would seem to allow for little argument. Why such a conclusion should in no event be arrived at merits the following discussion.

A second reason why there should be no attempt to bring investment dollars into the mechanics of ratemaking is the likely effect upon the investment policy of individual companies. The investment policy a particular company should adopt depends on many factors including the relative size of its capital and surplus account. If a high level of surplus is available, higher yield from more volatile investments may safely be sought. Introducing an investment income element into the rate formula would tend to induce some companies to shift from more conservative investments, to the detriment of the public interest in maintaining high standards of solvency. A company which feels it needs to keep an appreciable portion of its reserves for workers' compensation insurance either in the form of cash or comparatively low-yield investments, should not be discouraged from so doing by the ratemaking procedure.

A third reason is that a drop in investment dollars because of fluctuating economic conditions must of necessity be made up by increased rates under this theory. Coupled with the incentive toward more speculative investing alluded to above, there may very well be an aversion to a "two-way" operation on the inclusion of investment income; and, yet, to conduct the program on any other basis would tend to produce a pricing bias against the carriers.

A fourth reason is that if investment income earned by insurance companies were taken into account in the mechanics of workers' compensation insurance ratemaking, the present provision of 2.5% of premium for profit and contingencies would be completely inadequate. The 2.5% profit and contingencies factor produces, at best, marginal rates today. Obviously, if the modest 2.5% profit and contingencies factor were reduced or eliminated it would make it increasingly more difficult to attract capital to this business.

Finally, consideration would have to be given in the ratemaking procedures to the particular type of investments properly attributable to reserve accounts. Since these accounts generally represent liabilities that must be met promptly, the assets represented by them would generally be invested in highly liquid low-yield securities, or held as cash or its equivalent. Very probably the reserve funds are invested differently for the several lines of insurance depending on the particular company's relative volume by line and the degree of liquidity necessary.

* * * *

Granted that the investment return is not properly to be included in the ratemaking procedure, can the reasonableness of insurance rates nevertheless be given "due consideration" or otherwise evaluated in the light of investment income? The answer is that it can be. As stated earlier, the return from investment of unearned premium reserves the loss reserves should be combined with the anticipated underwriting return to determine the reasonableness of the overall return from both operations. The attached exhibits show our estimate of the amount of investment income from the reserves during the most recent available periods. Note that the total return from both reserves for the latest available periods (before Federal Income Taxes) is 3.94% (.76% + 3.18%). This, combined with the anticipated 2.5% return from underwriting, produces a total return from both underwriting and investments (before Federal Income Taxes) of 6.44% (3.94% + 2.5%), or an estimated total net return (after Federal Income Taxes) 4.59% (3.29% + 1.3%).

The companies writing workers' compensation insurance are not monopolistic utilities. There are a sizable number competing for the business in every state. In addition to competing in final premium charged, they are competing strenuously with each other in the service and attention which they render to policyholders. Therefore, they are entitled, even though regulated, to that profit on sales which prudent management feels is necessary for the long-run good of the business.

With this background, it is evident that the underwriting profit and contingencies allowance (if earned), plus the investment income on reserves adds up to a most modest income for workers' compensation insurance carriers. Otherwise expressed the rates meet all of the standards set forth in the rating law, and due consideration has been given to investment income from unearned premium reserves and loss reserves, as well as all other factors deemed relevant.

50-11/80

ATTACHMENT I

Investment Income on Unearned Premium Reserves

The attached exhibits represent estimates of investment income from unearned premium reserves for stock carriers based on countrywide data covering Calendar Years 1978 and 1979.

An explanation of certain of the items in the exhibits follows. The items are assigned the same number as the lines on the exhibit.

1, 2 - These figures were obtained from Best's Fire and Casualty Aggregates and Averages. (Hereinafter referred to as Best's).

4(a) - It is estimated that workers' compensation premiums are remitted on the average approximately 105 days after effective dates of policies. This is 7/24 of a year, and, thus, a .292 reduction factor is applied to the mean unearned premium reserves.

The average delay in remission of premiums for all fire and casualty lines combined is approximately 60 days. This is derived from the ratio of premium balances to net premiums written for stock companies, as shown in Best's, together with a small increment for the non-admitted premium balances over 90 days due. In workers' compensation insurance premiums are actually collected by the carriers at a much slower rate than that for most other lines. This is due to the fact that virtually all workers' compensation policies are written on a payroll audit basis, with either a single audit made after the termination of the policy or interim audits made during the policy term. Of necessity, there is usually about a two month delay in making audits, and on balance the results of audits show a substantial excess of additional premium due over premium returns.

It is estimated, therefore, that there is an additional 45 day delay in remitting workers' compensation premiums over the average 60 day delay applicable to all lines combined.

4(b) - Deduction is taken here of certain items of expense which must be prepaid by the carrier out of its own resources since at inception 100% of the premium is allocated to the unearned premium reserves. The amount of the deduction has been reduced to recognize the delay remission of premium referred to in 4(a) above. The figures cited below (except the Allowance for Profit and Contingencies) were obtained from the Insurance Expense Exhibit compilation prepared by the National Council and distributed to all Insurance Departments:

Item	1978	1979
Commission	8.4%	7.8%
Other Acquisition	1.8	1.9
50% of General Expense	3.05	3.2
Taxes	3.9	3.8
Allowance for Profit and Contingencies	2.5	2.5
	19.65%	19.20%

These deductions for the Accounting Method are, in our opinion, conservative for the following reasons:

a. The rates of Commission and Other Acquisition expenses actually incurred and employed in the calculation reflect such expenses from all sized risks, including a substantial volume of business derived from the larger insureds. With respect to the larger risks, the rates of commission are lower and the greater proportion of the premium is developed on interim audits. These audits are made usually monthly or quarterly and when billed represent earned premium in full. Unearned premium reserves are developed only from deposit premiums and additional premiums charged by endorsement during the policy term. Since the smaller risks are not the ones normally using the interim audit arrangement, it can be assumed that a great proportion of the premiums going into the unearned premium reserve is derived from the smaller risks with their relatively higher rate of commission. Thus, it is a fair assumption that the many thousands of risks with premium under $1,000 require expenditure of 17.5% for commissions and other acquisition at inception (this is the allowance for Acquisition applicable to the 1st $1,000 of premium) and the deposit premium from these same risks must be allocated to the unearned premium reserve without deduction for this expense.

b. Concerning interim audits, this method of operation is the equivalent of a negative investment income. First, the premium is not developed until the exposure to loss has gone by and, second, there is a 60 day delay in remitting the premium through the agent. What this means is that as respects any one risk, the payments of any loss is coming from company surplus and any recovery to surplus will not take place until several months later when the interim audited premiums are remitted.

c. Only 50% of the General Expense item has been assumed as applicable at inception of the policy. This is to recognize that payroll audit and the preparation of unit cards represent expenses incurred after expiration of the policy. It could be reasoned, however, that these are offset somewhat by the expenditure of the allowance for inspection for this expense starts when business is written. It is quite probable that more than 50% of the General Expense is absorbed at or near the inception of the policy.

8-The average net rate of return is the five-year average ratio of investment income to all assets available for investment and was based on data for stock companies from Best's. The figure was reduced for investment expense which is the five-year average ratio of investment expenses incurred to all assets available for investment and also was based on figures from Best's.

10 - This is derived from net earned premium aggregates for stock companies as reported in Best's, converted to a standard premium basis by application of the ratio of standard to net premium from National Council calendar year experience.

12 - The Federal Income Tax used here was calculated by applying the Federal Tax rates to the distribution of assets for stock companies appearing in Best's.

STOCK COMPANIES - WORKERS' COMPENSATION

INVESTMENT INCOME ON UNEARNED PREMIUM RESERVES
(1979 Countrywide Data, Last Three 000 Omitted)

1.	Unearned Premium Reserve - 12-31-78	2,153,057
2.	Unearned Premium Reserve - 12-31-79	2,580,782
3.	Mean Unearned Premium Reserve in 1979	2,366,920
4.	Deductions	
	*(a) Delayed Remission of Premiums .292 x (3)	691,141
	**(b) Accounting Methods'	374,276
5.	Net Subject to Investment (3)-(4a)-(4b)	1,301,503
6.	Average Rate of Return++	6.47%
7.	Investment Expense++	.32%
8.	Average Net Rate of Return	6.15%
9.	Investment Earnings on Net Subject to Investment (5)x(8)	80,042
10.	Standard Earned Premium for 1979	10,095,728
11.	Average Rate of Return as Percent of Earned Premium (Prior to Federal Income Tax) (9)÷(10)	.79%
12.	Average Rate of Return after Federal Income Tax (83.2% x (11))+	.66%

*To reflect delay in remitting premium to companies.
**Adjusted for the fact that commission and taxes are incurred upon receipt of premium. (.192(3) - (4a) (.116))
+100.0% - 16.8% = 83.2%
++Based on 5 year average, 75-79

ATTACHMENT - II

Investment Income on Loss Reserves - SOUTH CAROLINA

The attached exhibit presents an estimate of investment income from loss reserves based on a method of tracing payments of losses during the time premium from transactions giving rise to such losses is in the possession of the carriers. It is a method which is based on the use of actuarial statistical data showing the distribution of losses by type of injury and the average duration of cases by type of injury. For convenience, the calculations are expressed in terms of the amount of investment income per $10,000 of losses.

An explanation of certain of the columns on the exhibit follows:

Column (2) represents South Carolina distribution of incurred losses by type of injury obtained from unit report summary data.

Column (4) represents the percentage of losses by type of injury which are estimated to be paid in installments and not paid in a lump sum. It is the best estimate of insurance company actuaries that all permanent partial non-schedule amounts and 50% of the schedule amounts are paid on an installment basis. The figures in column (4) for permanent partial cases are derived according to the relative weight of non-schedule and schedule losses in each type of injury category. With respect to the medical portion of permanent total and major permanent partial cases, see notes (a) and (b) at the bottom of the exhibit.

Column (6) has been obtained by dividing total incurred losses by type of injury for policy period 75-77 by the average annual benefit by type of injury for these periods. The average duration of medical losses in major permanent partial cases is estimated to be 75% of the duration of major permanent partial indemnity losses. The average duration of medical losses in minor permanent partial cases is estimated to be 50% of the duration of minor permanent partial indemnity cases.

Column (7) is the investment income at 6.15% per annum from the amounts in Column (5) for the duration indicated on Column (6). The Column (5) amounts will decrease each year as a result of payouts to injured workers. Note, however, that under the National Council's Unit Statistical Plan death and permanent total cases involving life pensions must be reported on a present value basis at 3-1/2% interest. As respects these cases the investment income figures in Column (7) are <u>overstated.</u>

Line 11. The Federal Income Tax used here was calculated by applying the Federal Tax rates to the distribution of assets for stock companies appearing in Best's.

INVESTMENT INCOME BASED ON $10,000 OF EXPECTED LOSSES - SOUTH CAROLINA

(1) Type of Injury	(2) % of South Carolina Losses	(3) Col.(2) Expressed In Dollars	(4) % of Col.(3) Not Paid In Lump Sum	(5) Amount Not Paid In Lump Sum (3)x(4)	(6) Average Duration Of Case (Years)	(7) Investment Income (Based On 6.15 % Rate of Return)
Death (Ind. Only)	4.93	493.00	81.05	399.58	6.4252	71.74
Permanent Total (Ind.)	0.61	61.00	100.00	61.00	6.8430	11.36
Permanent Total (Med.)	0.18	18.00	(a)	18.00	6.8430	1.95
Major P.P. (Ind.)	35.58	3,558.00	70.57	2,510.88	3.8557	303.69
Major P.P. (Med.)	8.89	889.00	(b)	889.00	2.8918 (c)	46.89
Minor P.P. (Ind.)	14.41	1,441.00	69.65	1,003.66	0.5658	34.31
Minor P.P. (Med.)	6.73	673.00	100.00	673.00	0.2829 (d)	13.95
Temporary Total (Ind.)	11.94	1,194.00	100.00	1,194.00	0.1487	20.11
Medical (Death, T.T., non-comp., and contract)	16.73	1,673.00	-0-	-0-	-0-	-0-
TOTAL	100.00	10,000.00	xx	xx	xx	504.00

8. Permissible Loss Ratio (Excl. Loss Adj.)	.631	
9. Standard Premium $10,000/(8)	15,048	
10. Investment Income from Loss Reserves as a Percent of Premium Prior to Federal Income Tax : Sum (7)/(9)	3.18 %	
11. Average Federal Income Tax Rate	16.8 %	
12. Investment Income from Loss Reserves as a Percent of Premium after Federal Income Tax : (10)x[100%-(11)]	2.65 %	

(a) 50% of Permanent Total Medical Losses are paid in first year, 20% in second year, and 30% over remaining duration.
(b) 90% of Major Permanent Partial Medical Losses are paid in first year, and 10% over remaining duration.
(c) Major Permanent Partial Medical duration is 75% of Major Permanent Partial Indemnity Duration.
(d) Minor Permanent Partial Medical duration is 50% of Minor Permanent Partial Indemnity Duration.

Illustration B shows that based on 1979 stock company expense data, recent NCCI filed expenses are slightly low, actual countrywide 29.4% and actual Arizona 29.0% compared to filed 28.4%. Based on total stock and mutual company combined expenses, excluding SCF, the filed expense provisions are somewhat high, actual countrywide 26.6% and actual Arizona 27.4% compared to filed 28.4%. The decision to rely on stock insurer expenses or combined expenses rests with the Director. We recommend that the Department collect data in the format of Illustration B to monitor actual expenses compared to filed expenses (monitoring Form included as Exhibit VI, page 6).

NCCI Provision for
Profit and Contingencies

The treatment of investment income and the provision for underwriting "profit and contingencies" (profit) are virtually inseparable in the discussion of workers' compensation ratemaking. The NCCI does not explicitly recognize investment income in its ratemaking formulas, proposing that the 2.5% provision for profit and contingencies was selected in recognition of investment income. In the absence of investment income, 2.5% would be unacceptably low, and historically, insurers have not even attained the 2.5% profit level.

Investment income results from the time lag between the collection of premium and the payment of claims and expenses. Two items which influence the amount of investment income are the following:

- The rate of return available on invested assets
- The length of time between the collection of premium and the payment of claims

ILLUSTRATION C

Arizona Workers' Compensation Examination

U.S. Treasury Issues - Yields to Maturity

Term to Maturity	6/29/76	6/29/77	6/29/78	6/28/79	6/30/80
Less than 1 year	5.81%	5.34%	7.78%	9.23%	7.57%
1 to 2 years	6.73	5.84	8.34	8.90	8.61
2 to 3 years	7.06	6.11	8.41	8.71	8.99
3 to 4 years	7.23	6.38	8.40	8.67	9.22
4 to 5 years	7.45	6.51	8.41	8.67	9.27
5 to 6 years	7.39	6.69	8.44	8.51	9.44
6 to 7 years	7.64	6.84	8.41	8.68	9.51
7 to 8 years	7.40	6.64	8.51	8.59	9.67
8 to 9 years	7.50	7.12	8.36	8.74	9.78
9 to 10 years	7.82	6.99	8.54	8.78	9.58
10 to 15 years	7.22	6.89	8.51	8.81	9.95
15 to 20 years	7.40	8.86	8.42	8.71	9.95
20 to 25 years	7.90	7.53	8.58	8.75	10.01

Workers' compensation claims are paid more slowly than claims in most other lines of insurance. Hence, the level of investment income is larger.

In December 1978, the NCCI published a booklet entitled, Restatement of the Consideration of Investment Income in Workers' Compensation Insurance Ratemaking quantifying the amount of investment income available from both the unearned premium reserves and the loss reserves. In the booklet the rate of return on invested assets was based on insurance company results from 1972-1976. The lag from premium collection to claim payment was based on NCCI data with respect to the average duration by type of disability and the proportion of claims settled on a lump sum basis.

In the next three sections we discuss the following: (1) alternative approaches to determining interest rates; (2) payment patterns which we believe are more appropriate than the NCCI approach; and (3) issues involved in selecting a target rate of return and its relationship to underwriting profits.

Determination of
Investment Yield

The NCCI booklet uses the industrywide ratio of net investment income to net invested assets from 1972-1976 to calculate a 5.25% yield before federal income taxes. The investment return can vary widely by company, depending on investment strategy, skill, and fortune. Some key items to consider in evaluating this rate of return include the following:

- A company may be in a weak surplus position and therefore seek to avoid risk. It might choose conservative lower yielding investments.
- A company may choose lower yielding tax-exempt bonds if it has underwriting profits or conversely, higher-yielding taxable investments when it experiences underwriting losses.
- Investment in equities will produce year-to-year variances in investment returns, particularly in the case of stocks of affiliated or subsidiary companies.

- Realized and unrealized capital gains may have an impact, but it would be necessary to measure rates of return over a period of at least ten years in order to provide the necessary stability in yield rates.

- The investment strategy of insurers in holding company groups may relate to optimizing the group's results, perhaps at the expense of the insurer's stated results.

In view of the difficulties associated with the use of actual company investment yields, we believe the approach now utilized in Massachusetts is more appropriate. The Massachusetts approach recognizes that companies could purchase Treasury notes with maturity schedules comparable to the anticipated loss payments. These investments have little risk with respect to loss of principal, and they are readily available in large quantities. While limiting investments to these securities may not be appropriate in realistic situations, this low-risk strategy provides a baseline to measure actual company performance. If companies can achieve greater investment returns, then the extra yields are not appropriately considered in the rate setting process. On the other hand, neither are lower yields. The facing Illustration C shows yields of U.S. Treasury notes with maturities appropriate for workers' compensation payment rates.

Loss Payment Pattern

Illustration D (facing page 14) compares the SCF payment pattern, the payment pattern implicit in the NCCI investment income study and the payment pattern developed in the Pennsylvania study. Because of legal and social trends over the more than 20-year experience period, claim payments related to future policy periods are likely to be slower than indicated on Illustration D; thus, investment income may be larger than indicated in the subsequent discussion.

ILLUSTRATION D

Arizona Workers' Compensation Examination

Loss Payment Patterns

PA Study		SCF Data		NCCI Study	
Time (Years)	% Paid During Year	Time (Years)	% Paid During Year	Time (Years)	% Paid During Year
0 - 1½	33.0%	0 - 1	26.8%	Lump(1)	26.3%
1½ - 2½	9.0	1 - 2	20.2	0 - 1(2)	46.2
2½ - 3½	7.0	2 - 3	7.6	1 - 2	6.3
3½ - 4½	6.0	3 - 4	5.2	2 - 3	5.8
4½ - 5½	4.5	4 - 5	4.1	3 - 4	5.6
5½ - 6½	4.3	5 - 6	3.6	4 - 5	3.0
6½ - 7½	4.0	6 - 7	3.0	5 - 6	1.0
7½ - 8½	3.8	7 - 8	2.9	6 - 7	1.0
8½ - 9½	3.6	8 - 9	2.7	7 - 8	1.0
9½ - 10½	3.3	9 - 10	2.3	8 - 9	1.0
10½ - 11½	3.1	10 - 11	2.2	9 - 10	1.0
11½ - 12½	2.8	11 - 12	2.2	10 - 11	0.6
12½ - 13½	2.6	12 - 13	2.0	11 - 12	0.5
13½ - 14½	2.4	13 - 14	2.0	12 - 13	0.5
14½ - 15½	2.1	14 - 15	1.8	13 - 14	0.2
15½ - 16½	1.9	15 - 16	1.8	Total	100.0%
16½ - 17½	1.7	16 - 17	1.8		
17½ - 18½	1.4	17 - 18	1.5		
18½ - 19½	1.2	18 - 19	1.3		
19½ - 20½	0.9	19 - 20	1.4		
20½ - 21½	0.7	20 - 21	1.1		
21½ - 22½	0.5	21 - 22	1.3		
22½ - 23½	0.2	22 - 23	1.2		
Total	100.0%	Total	100.0%		

(1) No investment income credited in NCCI report to lump sum payments.

(2) 0-1 time period discounted 0.9 years.

Table 4 below compares investment income on loss reserves which would result from each of the three payment patterns. The investment income is measured as the difference between the discounted and undiscounted value of incurred losses.

Table 4

Investment Income on Loss Reserves

Percent of Net Earned Premium Before Taxes

Assumed Interest Rate	PA Study	SCF Data	NCCI
6%	15%	13%	5%
7%	17	15	6
8%	18	16	6
9%	20	17	7
10%	21	18	8

Assuming NCCI Arizona standard expenses and 2½% underwriting profit.

While the results from the Pennsylvania study and the SCF data are similar, the NCCI estimates are much smaller. We have identified two of the reasons for the difference. First, the NCCI attributes no investment income to lump-sum payments. Since lump sum payments typically occur several years after the accident, this is not appropriate.

Second, NCCI estimated the average payment duration for each type of claim and assumed all claims are paid for in exactly that period of time. For example, NCCI estimated that the average permanent total claim involved payments over the 13.5 year period. Actually, some claimants would collect benefits for more than 13.5 years and others would collect benefits for less than 13.5 years; however, the

additional investment income earned on claims which are paid for more than 13.5 years greatly exceeds the loss of investment income on claims which terminate prior to 13.5 years.

An Adequate Underwriting Profit

Much controversy surrounds the question of what constitutes an adequate underwriting profit. The NCCI position is that a 2½% underwriting profit is adequate because investment income is also available to insurers. If this position were correct when investment income approximated 6% of premium, as calculated by the NCCI, it requires further examination if investment income is over 16% as calculated in the previous section.

Currently, increasing attention is being given to the viewpoint that an underwriting profit target should be viewed in the context of the entire rate of return from underwriting and investment income compared to some base of invested assets. The arguments in this area relate to questions which include the following:

- What is the appropriate asset base?
- What comparisons to other industries are appropriate?
- What is the stockholder equity in a stock insurance company?

One school of thought holds that the rate of return should be calculated as underwriting profit plus investment income divided by total assets, and that this rate of return should be compared to the rate of return on total assets in other financial intermediaries such as banks.

We note two difficulties in the application of this approach. First, workers' compensation related assets approximate two times the annual premiums; i.e., loss reserves are 1.5 to 2.0 times premium and policyholder surplus is at least 0.30 of premium. Thus, underwriting profits or losses, unless they are large, contribute little to the rate of return and the method primarily measures investment performance.

Second, most insurance industry assets, particularly for workers' compensation insurance, are derived from its policyholders who receive no explicit return for their investment. In other industries where a significant share of the assets are not contributed by the owners, the cost of the "borrowed" funds is included as an item of "profit" before calculating a total rate of return. Since the insurance policyholders receive no explicit returns for their investment compared to other industries, there may be an understatement in the total "profit" used to measure the rate of return on total assets for an insurance company.

Regulators utilizing a rate of return concept in the insurance industry, most notably New Jersey and Massachusetts, have favored the measurement of rate of return based on stockholder equity. This approach assumes that if stockholders receive an adequate rate of return from their investment then additional capital needed by the insurance industry for continued growth will be available.

One key to converting underwriting profit and investment income to a rate of return on stockholder equity is to measure the appropriate ratio of stockholder equity to premium. A major component of stockholder equity is policyholder surplus (surplus). Ratios of premium to surplus varying from 1:1 to 4:1 have been supported as appropriate for workers' compensation insurance. The average ratio of premium to surplus for all lines of business at the end of 1979 was approximately 2:1.

The upper portion of the facing Illustration E shows the underwriting profit or loss required to produce a given return on stockholder equity, assumed to equal policyholder surplus, based on various interest rates. Negative underwriting results are shown to produce favorable returns on stockholder equity.

ILLUSTRATION E

Ari na Workers' Compensation Examination

t Underwriting Gain (Loss)
For Selecte Interest Assumption and Before Tax Return on Equity

Discounted Reserves

Interest Rate*	Loss Reserve Discount	Before Tax Return on Equity 10%	15%	20%	25%	30%	35%
5%	17.4%	(10.7%)	(7.8%)	(5.0%)	(2.2%)	0.7%	3.5%
6%	19.8	(13.4)	(10.5)	(7.6)	(4.7)	(1.8)	1.1
7%	22.0	(16.0)	(13.0)	(10.1)	(7.1)	(4.2)	(1.3)
8%	24.0	(18.4)	(15.4)	(12.5)	(9.5)	(6.5)	(3.5)
9%	25.7	(20.8)	(17.8)	(14.7)	(11.7)	(8.7)	(5.6)
10%	27.4	(23.0)	(20.0)	(16.9)	(13.8)	(10.8)	(7.7)

Undiscounted Reserves

Interest Rate*	Loss Reserve Discount	Before Tax Return on Equity 10%	15%	20%	25%	30%	35%
5%	17.4%	(7.8%)	(3.2%)	0.7%	3.4%	6.9%	10.6%
6%	19.8	(10.6)	(5.5)	(1.3)	2.5	5.9	9.1
7%	22.0	(13.5)	(7.9)	(3.3)	0.7	4.3	7.7
8%	24.0	(16.6)	(10.4)	(5.4)	(1.2)	2.7	6.2
9%	25.7	(19.8)	(12.9)	(7.5)	(3.0)	1.0	4.7
10%	27.4	(23.0)	(15.5)	(9.7)	(4.9)	(0.6)	3.2

Assumptions:

(1) Based on SCF payment pattern
(2) Loss + LAE = $66.75 (undiscounted)
(3) Present value of expenses = $30.75
(4) Explicit surplus equals 50% of premium
(5) Target Underwriting Gain (Loss) =

$$(1.0 - \frac{\text{undiscounted incurred losses + LAE + expenses}}{\text{premium}}) \times 100\%$$

Underwriting gain (loss) is based on undiscounted losses in both the upper and lower portions of this illustration so that (1) the results are comparable to each other; and (2) the results in the upper section are comparable to work done by others or this subject in which the impact of ratemaking assumptions on loss reserving were not fully developed.

See Exhibit III for a description of the methodology underlying these results.

*Interest rate before federal income taxes.

One difficulty with the results of Illustration E is that they imply that loss reserves have been discounted at the selected interest rate. While some workers' compensation insurers discount loss reserves, most do not, and we are not aware of any private insurer which discounts its workers' compensation reserves at a 6-10% interest rate. From a solvency standpoint, the 2:1 premium to surplus ratio may be appropriate only when loss reserves are at most only partially discounted; however, for a company to collect premiums based on discounted losses and at the same time to establish loss reserves which are either undiscounted or only partially discounted, additional stockholder funds must be invested. The lower section of Illustration E recognizes the additional stockholder investments required to maintain undiscounted reserves.

The approach underlying the lower section of Illustration E is conservative. If current industry practice is a 2:1 premium to surplus ratio, it also includes partial interest discounting, some purposeful and some resulting from inadequate recognition of liabilities. A company operating with undiscounted loss reserves and a 2:1 premium to surplus ratio actually has a "true" premium to surplus ratio of only 0.88, when surplus is redefined as stated surplus plus the difference between stated reserves and discounted reserves at 8% interest.

Again, from a solvency perspective, the more conservative mode of operation is probably closer to correct than the less conservative mode of operation implied by the upper portion of Illustration E. However, even with the conservative mode of operation, an insurance company's stockholders could receive a reasonable return on their investment with negative underwriting results. Exhibit III provides further details on the method used to calculate the results shown in Illustration E and the "true" premium to surplus ratio.

STATE OF MINNESOTA

DEPARTMENT OF COMMERCE

INSURANCE DIVISION

Before the Commissioner of Insurance

In the Matter of the Petition for
Revision of Rates for Workers'
Compensation Insurance of the
Workers' Compensation Insurers
Rating Association of Minnesota/

Issued and Entered
this 21st day of April 1981
by Michael D. Markman
Commissioner of Insurance

ORDER FOR MODIFICATION OF MATTERS
RAISED IN THE PETITION AND FOR ADOPTION OF
A SCHEDULE OF RATES FOR USE IN MINNESOTA

I.
BACKGROUND

On April 30, 1979, the Workers' Compensation Insurers Rating Association of Minnesota ("Association") filed a petition requesting modification of the schedule of rates for workers' compensation insurance. That petition was returned by the Commissioner of Insurance ("Commissioner") with the directive that the Association file a revised petition that would comply with legislation (Minn. Laws 1979, Spec. Sess. ch. 3) that was enacted subsequent to the original filing. The Association filed a revised petition with the

the Association acceded was the single one which served to increase the rate request. One must conclude that the Association's accedence was either completely gratuitous or the result of the Association's misunderstanding of its own petition. Whichever is true, neither is appreciated.

Expense Limitation

The Association includes a factor in the petition that serves to reduce rates by reflecting a self-imposed cap on insurers expenses that do not vary in a one to one relationship with loss experience. The Association's factor follows a decision to contain the increase in certain expenses to 6.2% over and above any inflationary growth in the premium base.

MACI witness Chang and Staff witness Lowe contend that if the expenses in question do not necessarily and directly follow loss movement, then it is reasonable to suppose that the growth of these expenses should be held to the increase in inflation as reflected in wage base and no more. Chang and Lowe, however, do not offer sufficient evidence to support the position that a portion of insurer expenses should increase only to the extent of inflation in the rate base. No party to this proceeding has conducted the necessary expense analysis to substantiate the amount by which expenses should be allowed to grow, but the Association proposal is considered to be reasonable at this time since it has the result of imposing some cap on insurer expenses where there is otherwise none. Further work on this issue would prove useful in considering future rate petitions.

Permissible Loss Ratio, Combined Ratio, Underwriting Profit Profit, and Profitability

Rates are ideally designed to generate premium in an amount sufficient to cover losses and expenses while providing a reasonable return on the insurer's investment. The Association's request for an increase in rates is mathematically based upon a comparison of (1) the estimated percentage of premium dollar currently used to pay ultimate losses as reflected in policy year experience and (2) the percentage of premium which the Association asserts should be allowed for losses (permissible loss ratio) in order to also allow insurers to cover expenses and earn a reasonable profit. The first percentage, the policy year experience loss ratio of 85.1%, is divided by the second, the permissible loss ratio of 62.2%, to yield an indication of rate level change.

The Association's request for a modification in rates is, then, premised upon critical assumptions that 35.3% of the premium dollar must be available to cover expenses and 2.5% is an appropriate underwriting profit. This leaves 62.2% as the permissible ratio. The rates proposed by the Association are thus based upon a combined ratio of 97.5%. This is the assumption as to the percentage of premium dollars that can be used to cover losses and expenses and will result in reasonable profitability for insurers.

Since the petition proposes a 2.5% profit and contingencies loading per premium dollar, the combined ratio that is arithmetically implied and that is assumed in the petition is 97.5%. The major assumption made by the Association in deriving the permissible loss ratio in the petition is that a 97.5% combined ratio is appropriate for workers' compensation insurers in that the rates calculated by using this assumption are neither inadequate nor excessive.

The Association has fallen far short of establishing the reasonableness of the assumption of a 97.5% combined ratio or, alternatively, a 2.5% underwriting profit. It is quite apparent upon reviewing the petition that the Association considered and addressed the reasonableness and implications of a 97.5% combined ratio only as an afterthought or supplement to the petition. The petition itself presents inadequate and inappropriate methodology upon which to base an analysis of the issue of rate excessiveness or inadequacy, for it does not address the reality that a premium dollar does not remain sequestered but is invested and grows with time.

The Association asserts that admittedly significant income from invested reserves is considered "implicitly" within the petition. The Association states that the rating formula is designed to implicitly recognize investment income but provides no evidence to substantiate the contention of designer foresight. No evidence exists in the record, for example, to support the notion that any element of the formula is designed to recognize the fact that loss payout patterns, interest rates, and, therefore, opportunities for investment returns change.

The Association's position that a 2.5% underwriting profit is somehow neither excessive nor inadequate requires more than an acceptance of the proposition that the 2.5% figure is right for Minnesota in 1981. The Association relies heavily on the fact that the 2.5% underwriting profit has been profit used in most other jurisdictions for several decades, implying that one must accept the proposition that this profit loading has also been right for every other jurisdiction for the last many years in spite of a changing environment of laws and the economy. This cannot be accepted without in-depth study. The Association, in alluding to this commonality among jurisdictions to justify the profit

factor in the petition, only succeeds in casting further doubt on the propriety of this factor for Minnesota. While the Association did attempt some further analysis, the evidence simply does not reasonably support the permissible ratio in the petition or the 97.5% combined ratio implicit to the petition and from which the permissible ratio is derived.

The fundamental issue to be addressed in determining the reasonableness of the Association's petition is the profitability that can be expected by insurers operating with the proposed rates. Traditionally, the only source of income considered in ratemaking has been underwriting income, despite the fact that investment income is a very important source of income to insurers in the workers' compensation line of business. The issue of profitability and rates requires answers to two questions:

(1) What is a fair return to insurers on the surplus or investment needed for the risk they bear in doing workers' compensation business in Minnesota?

(2) What is the combined ratio at which insurers can expect to attain a fair return?

Both of these questions were addressed at least indirectly during the course of the hearing and must be addressed in an appropriate examination of rates.

(i) Fair Return

The testimony presented by witnesses for the Association and the Staff regarding fair return is not based upon analysis which is optimal for deriving and determining a fair return benchmark. However, the record can be evaluated to arrive at an estimation of a value for fair return on surplus. The Association asserts that insurers should receive a return in the range of 18-20%. The Staff asserts that a return in the range of 11-25% is appropriate. A return benchmark value for use in assessing the excessiveness or inadequacy of the rate level proposed in the petition is necessary.

An 18% fair return value lies at the midpoint of the Staff position and at the lower end of the much more compact Association range. This return is appropriate for evaluating the expected profitability to insurers at rates derived from a given combined ratio. The choice of an 18% return as benchmark is also appropriately conservative in that it is justified due to flaws in the approaches of the Staff and the Association, including a serious failure to reflect the significance of the Reinsurance Association in

reducing risk. Contentions with respect to fair return were flawed by lack of thoroughness on the part of Staff and statistical-methodological error by the Association in its presentation.

A comprehensive risk-return analysis, making inter and intra-industry comparisons of properly calculated and appropriate profitability measures and accounting for risk-affecting factors such as the line of insurance and the Reinsurance Association, is imperative in bringing all relevant information to bear on the question of the return that should be earned by Minnesota workers' compensation insurers. This analysis will greatly contribute to the consideration of future rate petitions.

(ii) Appropriate Combined Ratio

Three witnesses addressed the question of "what return may be expected by insurers writing workers' compensation business in Minnesota at the rates proposed within the petition?" Two Association witnesses concluded that the rates in the petition would not result in excessive returns to insurers and are therefore not excessive. While agreeing on the non-excessiveness of the proposed rate levels, Association witnesses Plotkin and McAlenney arrived at their conclusions in very different manners.

The testimony of Association witness Plotkin is not persuasive for a number of reasons. These include (a) the use of a return on total capital approach, (b) the use of "expected" returns based upon past underwriting results, and (c) the use of historic, calendar year data.

Witness Plotkin's arguments as to the propriety of a total capital basis for comparing the profitability of the insurance industry and other industries are simply not compelling. In fact, it is wrongheaded to suggest that the role of loss reserves in the insurance industry and long term debt in other industries is analogous. The industrial sector issues both equity and long term debt and must generate a return to pay the interest on debt and to provide an adequate return to equity investors. In significant contrast, the source of investable funds within the insurance industry includes equity investment and premium dollars from policyholders. The insurer is obliged to provide a return only on the capital supplied by the equity investor. Consequently, the rate setting context the appropriate focus is the rate of return on equity capital (surplus) and not on any other basis.

Total capital, as defined by Plotkin, is not a fair or appropriate basis for comparing profitability of insurers with other industries. While there may be some logic to Plotkin's preference for the total capital approach in analyzing returns within the same industry or within groups of industries that operate in a somewhat similar fashion, returns on net worth or surplus are those that are appropriate for comparision in the insurance ratemaking setting. To assume otherwise is to ignore the fact that the purchasers of debt instruments in the manufacturing sector are investors, not customers as in the insurance industry. This is a fundamental difference which must be recognized.

Plotkin's analysis must be rejected for a second reason as well. He adopts the position that the rate level developed within the petition will not be sufficient to result in the profit and contingency loading that is put forth there, in effect dismissing the actuarial work and opinion of the Association. The essence of Plotkin's reasoning seems to be that actuaries and regulators haven't been right in the past, so we should expect them to continue to be consistently in error with respect to developing or adopting rates.The witness's study of expected returns for insurers is premised on the assumption that past combined ratio experience of workers' compensation insurers will be repeated. This is a cynical supposition that is is contrary both to the spirit of the hearing process and the rate level development in the petition.

The rate of return which is implicit in the Association's proposal is the appropriate level of profitability to be tested, and that rate of return stems from the 97.5% combined ratio of the petition. It is simply inappropriate for the Association to maintain, on the one hand, that its actuarial analysis is correct while also assuming that its choice of a 97.5% combined ratio will not be realized if the petition were to be granted.

The judgment of inadequacy or excessiveness of the rate level proposed this year should not be based upon past achievements but is properly made with respect to the rate level proposed within the petition and the rate of return implicit to the Association's petition. The Commissioner further notes that acceptance of witness Plotkin's argument is contrary to the Association's often repeated assertion that the rate formula used by the Association is true and tested. Witness Plotkin's point that the actual results will differ from the pro forma is well-taken, but it must and should be fully incorporated into the petition by

the Association if it is to be of any use (see discussion under subheading "Related Matters" of this section).

Finally, witness Plotkin contends that the Association's rate proposal implies a return on equity of over 22%. This figure is interesting in that it is considerably in excess of that estimated by Association witness McAlenney. Even so, it is at best a gross indication of return on equity since it is put forth without appropriate consideration of current interest rates and investment opportunities because it is derived from historic, calendar year data. In addition, the witness has not conducted a risk-return analysis to bridge the gap between Association testimony that indicates an average return on net worth for FTC-SEC companies of about 15% and the alleged return on equity for insurers of 22%, leaving unanswered the question of whether the disparity is reasonable.

Association witness McAlenney and Staff witness Kramer have provided testimony concerning alternate financial models which, though differing in several details, are both intended to address the issue of the return on surplus for Minnesota workers' compensation insurers. Each of the models in question is driven by a set of assumptions regarding combined ratio, claims payment patterns, rates of return on invested assets, and financial leverage. Given specific values for these assumptions, the models can be utilized to indicate the return on surplus that is expected to be attained by insurers. Each of the assumptions can be addressed in turn.

Clearly, the appropriate combined ratio to test the inadequacy or excessiveness of the proposed rate level is that combined ratio put forth in the petition, 97.5%. This is the combined ratio that incorporates the losses and expenses so laboriously developed in the petition, and that will be realized if all of the actuarial estimations contained in the petition are approximated.

The claims payment patterns used by the Association in their models differ substantially from the patterns used and developed by the Staff witnesses. Despite considerable testimony regarding the long-tailed nature of workers' compensation insurance, the two claims payment patterns assumed by the Association indicate that all losses are paid by the 15th year following the initial insurance transaction. Staff witness Lowe's claims payment patterns are based on Minnesota data and appear to be the most accurate and carefully developed pattern, though it is truncated

after the tenth year following the insurance transaction.

The claims payment pattern utilized by Staff witness Kramer in his financial model closely parallels that pattern developed by Lowe, who was the only actuary to testify to a payout pattern, and there is no distortion from use of the Kramer pattern. In addition, witness Lowe testified that the pay out of claims subsequent to the 10th year also closely parallels the Kramer pattern. The appropriate claims payment pattern for use in this proceeding is the 14 year pattern reflected in the Kramer financial model and supported by the actuarial analysis of Minnesota data by Staff witness Lowe. The Kramer pattern is most reasonable in that it is the most completely developed in terms of approximation to ultimate claims payment. It is also significant to note that the loss development factors used by the Association from fourth report to ultimate, ranging from 16.6% to 21.1% make the much shorter payout patterns assumed by the Association a near logical impossibility.

The record contains a good deal of information concerning investment earnings and interest rates and could reasonably support a range of assumptions with respect to the value of interest rates. Despite the volatility of the economy, it is clear that Association witness McAlenney's assumption of a 4.82% after tax investment return throughout most years of his models is inappropriately below returns that can be reasonably expected from 1981 premium dollars. Kramer's models utilized a variety of returns on invested assets, and while they clearly demonstrate the sensitivity of workers' compensation profitability to the return on invested assets they do not suggest the choice of any particular yield. Some choice of an estimated yield based on current and foreseeable yields is appropriate.

An assumption of a 7% after tax investment return is clearly reasonable and is chosen as the appropriate yield figure for use in this Order. It recognizes that historical returns are not applicable to present considerations and it is appropriately conservative with respect to the returns that could possibly be realized by more risk-taking investment strategies. That is, it has been for nearly two years, is currently, and will be for the foreseeable future very possible to invest in tax free instruments that yield at least 7% without incurring substantial risk to the principle. An assumption of a much higher yield may not be justified given the volatility of the economy and the implications such an assumption would hold for insurer risk. A higher yield assumption is not

considered prudent by the Commissioner, though a case could be made for assuming a higher yield.

The issues of the amount of premiums which are written for a given amount of surplus and the appropriate financial leverage are intertwined and may be considered simultaneously. The Association asserts that leverage is appropriately recognized through a loss reserves to surplus ratio based upon the argument that surplus or equity capital is needed to support loss reserves. This argument is compelling and a leverage measure based upon the ratio of loss related reserves to surplus is more appropriate than the Staff contention that a premium to surplus ratio is an appropriate leverage benchmark. In addition, the selection of a reserves (both loss and loss adjustment) to surplus leverage requirement insures that financial projection models will maintain appropriate surplus throughout the claims payment cycle.

The Association, however, has been overly conservative in establishing an assumption of a two to one loss reserves to surplus leverage ratio. The 2:1 ratio set forth by McAlenney stems from data that represents all insurance lines industrywide and is not appropriate for the workers' compensation line of business. Substantial and uncontested testimony has been introduced to substantiate that workers' compensation insurance is very different fom other lines of insurance due to characteristics of risk, length of claims payment tail and other factors. Clearly, to rely on a leverage measure based on overall insurance data is to ignore the important distinctions of workers' compensation insurance.

The Association value of reserves to surplus is dominated by too many insurers who write relatively little long-tail lines of business, but who write high volumes of potentially volatile short-tail, and quickly developing lines which require substantial surplus, but which do not generate massive loss reserves. State Farm and Allstate are but two examples of companies whose inclusion in the Association measure results in considerable skewing with respect to the leverage value. Workers' compensation insurance is necessarily a more highly leveraged business from a reserves to surplus standpoint and a more appropriate reserves to surplus ratio is 3:1.

The data entered into the record as part of the Association's special call confirms the reasoning advanced above and serves to support the Commissioner's judgment. Data regarding capital and

surplus attributable to Minnesota workers' compensation business, and insurers' Minnesota incurred losses are available for the same 1975-1976 time period used in the filing. The use of data from this time period is also appropriate since reported losses have had time to mature.

The overall 1975-76 ratio for incurred losses to surplus for all insurers responding to the special call is about 2.75:1. This figure, it should be noted, does not include any loss adjustment expenses which, according to the record, vary closely with losses and also are available for investment similar to loss reserves. One can look at the ratio of losses to surplus of the two leading writers of Minnesota workers' compensation to get an idea of the value of the ratio for companies whose overall business is weighted by workers' compensation. The weighted losses to surplus ratios of these companies for 1975-76 exceeds 3.5:1, again without adding loss adjustment expense.

Finally, the ratio over the 1975-76 period calculated from State Farm data is well under 2:1, confirming to the inappropriateness of the measure utilized by the Association. The choice of a 3:1 loss reserves to surplus leverage assumption reasonably recognizes the distinctions of the workers' compensation line of business and the fact that a conservative assumption is appropriate at this time pending further data. To assume a lower ratio, as the Association did, results in artificially lowering the rate on return on surplus by imposing an unrealistic constraint on leverage.

The financial model put forth by Staff witness Kramer is for most purposes more complete and comprehensive, and more fully captures and approximates the insurance transaction and traditional insurance accounting than the Association's model. While the structure and relationships of the model put forth by Staff witness Kramer may be more convenient and appropriate than those of the Association's model, there is no need to choose between models. Neither model should be used without a reconciliation of certain differences between the two.

Clearly, each model must ultimately yield approximately the same result when run with consistent assumptions. This will be the case when Kramer's model is adjusted to return surplus in excess of one-third of reserves at the end of each year, and the constraint with respect to investable percentage of reserves is removed from the McAlenney model. This latter condition is inappropriately imposed due to the concern is rate setting with marginal results.

Finally, one must decide upon the most appropriate discounting treatment in assessing insurer profitability. Kramer discounts the investment income stream to present value using a 6% discount rate, adds an assumed 6% return on raw capital, and divides this operating income by initial required surplus to get a percentage return on surplus. McAlenney uses an internal rate of return calculation to solve for the interest rate that is necessary to discount cash flow to the initial required surplus.

The record contains no compelling reason to choose either method over the other one. However, internal rate of return is used in this decision because it does not require a particular rate of interest for the purpose of making the discount. While Kramer's choice of the same discount rate as his assumed return on raw capital is defendable, he generates income with an investment and reinvestment rate which is in excess of the discount rate, thus showing additional returns for the model. It seems difficult to justify a discount rate which is less than the reinvestment rate. Internal rate of return, on the other hand, does not require the choice of a discount rate. Because this choice does not need to be made, internal rate of return was used in the final test of whether or not the 97.5% combined ratio yields excessive rates as well as in the determination of what combined ratio yields the appropriate (18%) expected return on surplus.

While differences can and do exist in the calculation of discounted cash flow by internal rate of return and net present value methods, no significant difference exists for the purposes of this hearing. To amplify, when the net present value of a capital project that is discounted at a value equal to the fair rate of return equals zero, the internal rate of return is equal to the value used in discounting (the fair return). Hence, either approach will yield consistent results in the present context if appropriately applied.

An appropriate hybrid model which provides the implications of a set of assumptions and indicates return on surplus or expected profitability can be easily applied employing assumptions for payout of losses, return on assets, and financial leverage as set forth above.

Attachment I displays cash flow and profitability implications resulting from the following set of

assumptions:

(a) A claims payment pattern as was utilized by Staff;

(b) An investment yield of 7% after taxes;

(c) Leverage equal to a 3:1 reserves to surplus ratio;

(d) An initial surplus requirement consistent with the leverage requirement;

(e) Loss and expense amounts per dollar of premium as set forth in the petition; and,

(f) Pay-out of surplus as it is no longer needed to support reserves.

This model indicates that workers' compensation insurers in Minnesota can reasonably expect a return on surplus in excess of 30% if operating with a 97.5% combined ratio. Rates that are derived using a 97.5% combined ratio therefore result in returns that are clearly and substantially above the 10% fair rate of return.

The Association proposes an expense loading or allowance of 35.3% of each manual premium dollar (this is in addition to the 2.5% profit and contingencies factor). This expense allowance is reasonably supported by the record. Given the expense allowance and the other necessary, reasonable, and appropriate assumptions, an iterative approach can be taken to discovering the combined ratio at which Minnesota workers' compensation insurers can be expected to attain a fair return on surplus.

Using the set of reasonable assumptions (a) through (f) as specified above, it is found that with rates based upon a combined ratio of 110% insurers can expect to realize a fair return on surplus of slightly more than 10% for the effective period. That is, making reasonable assumptions together with a combined ratio of 110%, a model which is fully consistent with the structures of both the Staff and the Association models indicates that the expected return on the surplus that is needed to write an amount of workers' compensation insurance business is the established fair return of 10%. A combined ratio of 110% yields a permissible loss ratio of 74.4%. The 74.4% permissible ratio, in turn, arithematically results in a policy year experience indication of 1.139 or 13.9%.

the elements specifically required in Minn. Stat. Section 79.171 for Minnesota insureds only. Where estimated or allocations are required, they must be specifically spelled out and justified. Failure to provide a complete set of data on these elements will result in rejection of the policy.

(viii) Finally, the length of time required for completion of this hearing must be considered. While several factors were beyond the control of all parties to this hearing, the time from filing of the petition to the issuance of the Order was unreasonably long. This is not only unfair to the Association members, but it also creates added complexity in the hearing in attempting to create an appropriate schedule of rates over such long periods of time.

In order to simplify and shorten the hearing process to a reasonable time, the Association should, in the future, include in its petition all of its prefiled testimony in support of the petition. This should allow the Commissioner to make a more timely determination of the adequacy of the petition as well as substantially shorten the time necessary for completion of all pre-hearing activities.

V.
CONCLUSIONS

Based upon the Findings in this matter, the Commissioner CONCLUDES that:

1. All requirements of law have been met in the consideration of the petition.

2. The Association has established the reasonableness of the on-level factors set forth in the petition and the following factors should be adopted for the purpose of adjusting reported policy year experience values of standard earned premium, incurred indemnity losses, and incurred medical losses to reflect current levels of rates and benefits:

   (i) 1.390, 1.539, and 1.000, respectively, for policy year 1975 experience, and

   (ii) 1.330, 1.418, and 1.000, respectively, for policy year 1976 experience.

3. The Association has established the reasonableness of the development factors set forth in the petition and the

following factors should be adopted and applied to reported policy year values of standard earned premium, incurred indemnity losses, and incurred medical losses to reflect estimates of ultimate values of these data:

(i) 1.010, 1.433, and 1.312, respectively, for policy year 1975 experience, and

(ii) 1.042, 1.715, and 1.376, respectively, for policy year 1976 experience.

4. The following uncontested factors should be adopted as set forth in the petition as the basis for distributing a modification in rate level among manufacturing, contracting, and all-other groups:

(i) Policy year differentials of .983, 1.010 and 1.003, respectively, and

(ii) Earned to manual premium differentials of 1.000, 1.010, and .992 respectively.

5. The Association has not adequately supported the methodology proposed for trend calculation as one that is appropriate to the task. It has also failed to establish the reasonableness of a specific value of 1.007 for the medical trend factor. A factor of 1.000 should be adopted until more and higher quality information is provided to justify a trend factor.

6. The uncontested factor of .965 should be adopted as set forth in the petition to recognize the change in the assessment rate for the special compensation fund.

7. The Association has failed to establish the reasonableness of recognizing the effects of legislation with the composite factor of .940 as contained in the petition. A factor of 1.025 is consistent with this Order and should be adopted.

8. The methodology used in the petition to reflect a limitation in insurer-controlled expenses is reasonable in view of the record and should be adopted.

9. The Association has failed to establish the reasonableness of a 62.2% permissible loss ratio, a combined ratio of 97.5%, and an underwriting porofit loading of 2.5% as contained in the petition. These related elements result in rates that are excessive.

10. The Association has established the reasonableness of an expense allowance of 35.3% per premium dollar as set forth in the petition and this expense loading should be adopted.

11. Together with the other factors and elements contained in the petition and consistent with this Order, a permissible loss ratio of 74.7% as derived from a combined ratio of 110% results in rates that are not excessive or inadequate, and should be adopted.

12. The cumulative indication for modification in the manual premium rate level that is arrived at using the factors consistent with Findings one through eleven indicates a manual premium rate level increase of 11.8%. This change in manual premium rate level is not excessive, inadequate, or unfairly discriminatory and should be adopted. The following summarization of changes displays this finding:

	Individual Effect	Cumulative Effect
Policy year experience	1.139	1.139
Trend factor	1.000	1.139
Special compensation fund	.965	1.099
Effect of Legislation	1.025	1.127
Limitation on company controlled expenses.	.992	1.118

13. The Association has established the reasonableness of the premium discount methodology set forth in the petition and premium discounts that are appropriately adjusted for a 110% combined ratio with no explicit profit and contingency factor should be adoped as follows:

Premium	Discount
First $1,000	0.0%
Next $4,000	9.8%
Next $95,000	14.0%
Over $100,000	15.5%

14. The Association has established the reasonableness of the adjustment set forth in the petition to comply with Minn. Stat. Section 79.211, subd. 1, and this 11.1% adjustment should be adopted. This factor in itself raised manual premium rates to offset a decrease in premium base but has no effect on the premiums ultimately paid for workers' compensation insurance.

15. The Association has established the reasonableness of amending pure premiums for certain individual classifications in accordance with the methodology in the petition and the proposal should be adopted.

16. The Association has established the reasonableness of (a) combining certain classifications and amending accordingly the classification assignment; (b) reassigning certain low credibility classifications, and (c) amending the retrospective rating plan in accordance with the petition and these uncontested proposals should be adopted.

17. Any calculation not specifically addressed in this Order and necessary in deriving rates for specific risk classifications should be calculated by the Association in accordance with the factors contained in these Findings.

18. The Association should arrange to tender an actuarial witness who has been privy to and participated in the workings, decisions, and judgments entered into by the Association's actuarial committee during any forthcoming rate hearing.

19. The Association should analyze the consistency of reserve margins, the impact of the margins on factors calculated by the Association, and include the results of the analysis in the next forthcoming rate petition.

20. The Association should study and consider the use of non-Minnesota data to supplement Minnesota data for low credibility classifications in accordance with this Order.

21. The Association should include the following data in any future petition:

    (a) The claims payment pattern assumed by the Association.

    (b) The assumption made by the Association concerning investment yield.

    (c) The required return on surplus assumed by the Association.

    (d) The financial leverage assumed by the Association.

    (e) A separate estimation of the investment earnings on premium dollars and surplus dollars.

    (f) All pre-filed testimony to be offered in support of its petition.

    This data must be included in an appropriate model which will demonstrate the actual returns expected by insurers.

22. In arriving at these findings and conclusions, the Commissioner has considered all evidence offered and received by the parties to the evidentiary hearings.

VI.
ORDER

It is therefore ORDERED that:

1. The rate level increase set forth in the petition shall be rejected.

2. An overall manual premium rate level increase of 11.6% shall be adopted as consistent with this Order. This increase shall only apply to new and renewal policies with effective dates on or after the effective date of this Order.

3. The Association shall perform all necessary and appropriate calculations which are consistent with this Order to derive rates for specific risk classifications.

4. The classification reassignments and combinations set forth in Association Exhibits E-I and E-II shall be adopted and incorporated in the classification system for workers' compensation.

5. The revisions to the retrospective rating plan as set forth in the petition shall be adopted.

6. The effective date of this order shall be June 1, 1981. The Association shall file a complete schedule of rates with the Commissioner as soon as reasonably possible for approval. All policyholders who have received or will receive renewal notices which do not incorporate this this Order, but whose policies are effective after the effective date of this Order shall be notified of the change prior to July 1, 1981.

It is further ORDERED that:

1. The Association shall conduct an analysis regarding the calculation of development factors and reserve margins as outlined in the Order and shall submit this analysis and conclusions as part of the next forthcoming rate petition.

2. The Association shall study and consider the use of non-Minnesota data to increase the credibility of low credibility classifications and shall either:

(a) Submit the study and conclusions as part of the next forthcoming rate petition, or

(b) Submit a plan and timetable for conducting such a study to the Commissioner for approval prior to the filing of the next forthcoming rate petition.

3. The Association shall provide the information described in paragraphs (a) through (e) below as a part of the next forthcoming rate petition together with an appropriate model for determining expected results:

(a) The claims payment pattern assumed for claims arising out of the effective period.

(b) The investment yield assumed for money invested by insurers.

(c) The assumption used by the Association regarding the required return on insurer surplus.

(d) The assumption used by the Association regarding financial leverage.

(e) A separate estimation of the earnings arising from premium dollars from the effective period and from required surplus dollars.

(f) All pre-filed testimony to be offered in support of its petition.

The Commissioner specifically retains jurisdiction of the matters contained herein and the authority to issue such further order or orders as he shall deem just, necessary, and appropriate.

MICHAEL D. MARKMAN
Commissioner of Insurance

ATTACHMENT I

Estimated Rate of Return at 97.5% Combined Ratio

Assumptions:
1) All loss and expense percentages as per the petition, with all expenses but for loss adjustment assumed to be paid at the beginning of year #1.
2) Claims payment pattern as per Staff witness Kramer, with first year payments assumed to be paid at the beginning of year #1.
3) 7% after tax investment return on both reserves and surplus.
4) Reserves to surplus ratio of 3:1 and release of surplus in excess of one-third of reserves.
5) Underwriting profit taxed at 46%.
6) $100,000 written premium.

End of Year	Loss Reserves	Required Surplus	Interest Income	Underwriting Profit	Return of Surplus	Total Income
1	62,814	20,938	5863	2500	6003	13,216
2	44,805	14,935	4182		3706	7,888
3	33,687	11,229	3144		2098	5,242
4	27,392	9,131	2557		1335	3,891
5	23,389	7,796	2183		865	3,048
6	20,792	6,931	1941		722	2,662
7	18,627	6,209	1738		537	2,275
8	17,017	5,672	1588		479	2,067
9	15,580	5,193	1454		388	1,843
10	14,414	4,805	1345		349	1,694
11	13,367	4,455	1248		326	1,574
12	12,388	4,129	1156		303	1,459
13	11,479	3,826	1071		3826	4,898

Internal Rate of Return = 30.5%

formula: internal rate of return = i when $\sum_{t=1}^{13} \frac{R_t}{(1+i)^t} - C = 0$

where R_t is cash flow at time t
and C is initial surplus

ATTACHMENT II

Estimated Rate of Return at 110% Combined Ratio

Assumptions: All assumptions as with the previous example except that losses are assumed to reflect a combined ratio of 110% and a negative tax is assumed for the underwriting loss.

End of Year	Loss Reserves	Required Surplus	Interest Income	Under-writing Profit	Return of Surplus	Total Income
1	74,128	24,709	6918	(10,000)	17,084	18,603
2	54,875	17,625	4935		4374	9309
3	39,754	13,251	3710		2476	6186
4	32,226	10,775	3017		1575	4592
5	27,600	9,200	2576		1021	3597
6	24,538	8,179	2290		852	3142
7	21,982	7,327	2052		633	2685
8	20,082	6,694	1874		565	2439
9	18,637	6,129	1716		459	2175
10	17,011	5,670	1588		412	2000
11	15,774	5,258	1472		385	1857
12	14,619	4,873	1364		358	1722
13	13,546	4,515	1264		4515	5780

Initial surplus required: 34,709

Internal Rate of Return = 18-18.5%

formula for calculating internal rate of return as before

Developing a Profit Margin from a Target Return to Equity

The relationship between the underwriting profit margin and the return-on-equity can be stated in precise mathematical terms and expressed in terms of financial variables. We will have as a result, a formula for the underwriting profit margin that produces a fair return to stockholders' equity, given any values for reserves, taxes, and premium to surplus ratios actually experienced by insurance companies selling workers' compensation.

The return to equity measures the after-tax income per dollar of stockholders' equity (S). Stockholders' equity is approximately equivalent to "surplus". The income from the firm comes from two sources: underwriting profits (or losses) and income from investing the reserves and surplus. Underwriting income can be expresses as the profit margin (p) times the premium volume (P):

$$p \cdot P$$

Investment income equals the return on invested assets (r_a) times reserves and surplus. If k is the ratio of reserves to premiums then investment income is $r_a (Pk + S)$

These two sources of income are taxed at different rates. Let t_i be the tax on investment income and t_u, the tax on underwriting income.

The after-tax return on equity is

$$r_e = \frac{(1 - t_i) \cdot r_a (Pk + S) + (1 - t_u) Pp}{S} \qquad (5\text{-}1)$$

If we let s be the ratio of premiums to surplus, this expression can be made more compact:

$$r_e = (1 - t_i)\ r_a\ (ks + 1) + (1 - t_u)\ sp \qquad (5\text{-}2)$$

Solving for p gives us:

$$p = \frac{r_e - (1 - t_i)\ ra\ (ks + 1)}{(1 - t_u)\ s}$$

An alternative way of deriving the return-on-equity is to use information about the timing of the cash flow and to determine how much a dollar of premiums will contribute to the firm before losses are reimbursed. Support for this method comes from the idea that the reserve to premium ratios in equation (3) represent past generations of policies, but regulation should only be concerned with the appropriate margin for the current cohort of policies. Kramer Capital Consultants have incorporated this method into a model which traces the income and costs of a set of policies through time. The net income is then reduced to a figure for return-to-equity.

An approximation to this approach lies in the various "discount" methods which have been proposed.[1] These methods compute investment income as the present discounted value of the cash flow. The return to equity can be expressed as

$$r_e = \frac{(1 - t_i)\ r_a\ S + [PD_p - (L + E)\ D_c\ ]\ (1 - t_i) - pP\ (t_u)}{S}$$

where Dp and Dc are discount factors for the premium flows and the flows of costs (expenses and losses).[2] By definition, $P\ (1 - p) = L + E$, so that

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[1] Various versions have been used by the South Carolina Department of Insurance, the Massachusetts Automobile Rating Bureau, Dr. Lena Chang, and others.

[2] Since the return on equity has the dimension of an annual rate of return, premiums and costs must be discounted as though they were received one year hence. For example, if premiums are received on average after three months and costs are paid on average after nine months, then $D_p = (1 + r_a)^{3/4}$ and $D_c = (1 + r_a)^{1/4}$. This information also assumes underwriting taxes are paid at year end. In practice this assumption may not be valid.

$$r_e = r_a + \frac{1}{s} p \left[D_p - (1 - p) D_c\right] (1 - t_i) - pp t_u \left(\frac{1}{s}\right)$$

$$= r_a + s \left[D_p - (1 - p) D_c\right] (1 - t_i) - p t_u s$$

or $$r_e - r_a - s (1 - t_i) (D_p - D_c) = ps (D_c (1 - t_i) - t_u)$$

$$\frac{r_e - r_a - s (1 - t_i) (D_p - D_c)}{s \left[D_c (1 - t_i) - t_u\right]} = p \qquad (5\text{-}3)$$

Equation (4) is only one version of the discount method. In principle, it is no different from the approach given by equation (3). The ratio of reserves to premiums in (3) plays approximately the same role as the average time period in which the cash flow is invested in (4). Our own preference is for (3) because of the need to determine a target return to equity appropriate for the risk of insurance. Whether one uses the Capital Assest Pricing Model or a more subjective evaluation, the target return is typically derived by assuming insurance firms have about average risk. However, within the insurance industry firms differ widely in their degree of risk because of variations in leverage and in investment of their assets. Consequently, saying that insurance has average risk must mean that the <u>average</u> insurance firm has a risk about equal to the average firm in the economy. This means that when we try to work from a target return-to-equity backwards to a fair profit margin, we should use the financial characteristics (leverage and investment return) of the average firm, rather than building a theoretical construct for a firm which concentrates on following the cash flow associated with one cohort of policies.

More on the Massachusetts Model and the CAPM

The CAPM

"Beta," the measure of systematic risk in the CAPM, is a function of the correlation between the return on an asset and the return to a stock market index. Betas are scaled so that a beta equal to 1.0 implies that a stock has exactly the average risk; a beta of zero implies that there is no correlation between the movements of the individual stock and the rest of the market. Betas can also be negative (in theory, at least). A negative beta means that a stock tends to perform well at just those times when the rest of the market is doing poorly, and poorly when the rest of the market is doing well.

The relationship between risk and return predicted by the CAPM is depicted graphically in Figure 1.

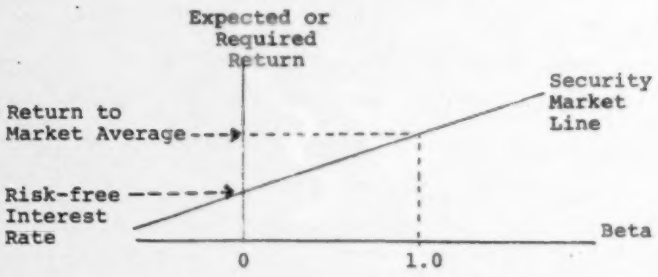

Figure 1: Risk and Return in the Capital Asset Pricing Model

Expected returns are plotted against betas. The higher the beta, the higher the expected, or required, return for a security. The line that plots the relationship between betas and returns is

known as the "security market line."[3]

The predictions of the CAPM have been subject to extensive empirical testing.[4] The results of these tests have been that beta appears to be a fairly complete measure of risk. There is a strong relationship between actual returns and betas. Also, no other characteristics of a stock (such as its individual variability) seem to add significantly to the explanatory power of betas. Nevertheless, as with most economic models, the empirical tests indicate that the CAPM does not fit the data precisely so that research in this area continues. As a result the CAPM should be thought of as the dominant risk/return model in finance, but it will probably continue to evolve. Its principal competitors, however, also rely on diversification and concepts like systematic risk to derive risk/return relationships.

The CAPM and Insurance Profits

The Massachusetts model separates the underwriting from the investment functions and calculates the systematic risk of underwriting alone.

The profit rate formula of the Massachusetts model is

$$p = \left[-r_f k \frac{(1-t_i)}{(1-t_u)} + \frac{r_f \cdot t_i}{s(1-t_u)} + B_u(r_m - r_f) \right] \cdot c \qquad (6\text{-}1)$$

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[3] It intersects the vertical axis (where beta equals zero) at a height equal to the riskless rate of interest selected (say, the return on U.S. Treasury Bills).

[4] See, for example, E.F. Fama and J. MacBeth "Risk, Return and Equilibrium: Empirical Tests," Journal of Political Economy, May-June, 1973; F. Black, M.C. Jensen and M. Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," in M.C. Jensen, Studies in the Theory of Capital Markets, New York: Praeger Publishers; or F. Black and M. Scholes, "The Effects of Dividend Yield Policy on Common Stock Prices and Returns," Journal of Financial Economics, 1, 1974.

where

r_f -- Treasury bill rate

k -- length of cash flow in years, or reserve/premium ratio

s -- premium/surplus ratio

t_i -- tax rate on investment income

t_u -- tax rate on underwriting income

B_u -- beta of underwriting

$r_m - r_f$ -- expected excess return on the market

c -- a conversion factor to discount properly [5]

The first two terms inside the brackets account for investment income and taxes. These terms will change from year to year. The third term, $B_u (r_m - r_f)$ represents the risk premium for underwriting.

B_u is the CAPM measure of the systematic risk of underwriting. Estimates of this number indicate that the risk of underwriting, by itself, is fairly low. Hill's (1979) original estimates covered a group of six firms from 1951 to 1965. Fairley's (1979) calculations covered a different sample of ten firms from 1970 through 1975. Hill later updated the results from Fairley's ten firm sample for the period 1975 through 1979.[6] In all cases, the estimated betas for underwriting of all lines of

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[5] C is 1.09 for the calculations presented in the text.

[6] Calculating the beta of underwriting is not a straightforward matter. It requires stock market data which is unavailable for a large percentage of U.S. insurance firms (since most do not have widely traded stock). Also, it is virtually impossible to calculate the beta of non-life underwriting for firms with substantial life insurance or other financial subsidiaries.

insurance were in the neighborhood of 0.20 (they varied between 0.15 and 0.23). Recalling that a beta of 1.0 represents average risk will provide a yardstick for this figure.

In order to determine the risk premium for underwriting, its beta must be multiplied by the average risk premium in the market (hence, a beta of 1.0 would produce the average risk premium). This gives us the term $B_u (r_m - r_f)$ in the formula. The average risk premium is measured by the expected "excess return" on the stock market. This excess return is the difference between the return on a virtually riskless asset (like U.S. Treasury bills) and the expected return on the average stock in the market (again measured by an index like the Standard & Poor's 500). Of course, the return investors expect to receive cannot be observed. In practice the long-run difference between the average return on the market and the Treasury bill yield is used as a proxy for investors' expectations.

The long-run difference, rather than only recent experience, is used because stock market returns (including capital gains) are highly variable from one year to the next. A common source for an estimate of the expected excess return on the market is Ibbotsen and Singuefield's (1976) calculation of 8.8% over the period 1926 to 1974.[7] When updated through 1979, the figure remains at 8.8%; limiting the calculation to the post World War II period produces a figure which is slightly lower.

One more step is needed to calculate the risk premium for

[7] Ibbotsen, R.G. and Singuefield, R.A. "Stocks, Bonds, Bills and Inflation: Year-by-Year Historical Returns, 1926-1974," Journal of Business (January 1976).

workers' compensation. The underwriting beta of 0.2 mentioned above was for all lines of insurance. Since workers' compensation has a longer payout, it is subject to greater than average risk. This greater risk is accounted for by multiplying the beta for all lines times the reserves-to-premium ratio for workers' compensation. If we assume the reserves-to-premium ratio is 2.0, the contribution of the risk premium to the workers' compensation profit margin will be $(2.0)\cdot(0.2)\cdot(8.8) = 3.5\%$.

For the calculations used in Table (4) in the main text t_u is the corporate tax rate when margins are positive; when margins are negative the tax shield is the forgone yield on taxempts relative to U.S. governments. When the profit rate is close to zero, it is possible that using the corporate tax rate induces a negative margin, but switching to the lower rate for the tax shield produces a contradictory positive margin. In years when this anomalous result occurs, we set the margin equal to zero. Table (6-1) gives the margin calculated under these assumptions during the period 1950-79:

Table 6-1

Average over:	Massachusetts Model Profit Rate
1950-59	0.15
1960-69	-3.14
1970-79	-7.67
1950-79	-3.55

The CAPM also gives us a quantitative method for setting a target return to equity. According to the CAPM the expected return on a security should be $r_e = r_f + B_e (r_m - r_f)$ (6-2)

where B_e is now the beta of the firm's equity. From equation (5-2) it will be clear that

$$B_e = (1-t_i)\ B_a\ (ks + 1) + (1 - t_u)\ sB_u \quad (6-3)$$

where B_a is the beta of the firm's investment portfolio. Equations (6-2) and (6-3) provide one way of estimating how the higher risk (due to a higher reserve/premium ratio) of a firm writing only worker's compensation would be reflected in its expected return to equity.

For the industry as a whole k is about 1.3 rather than 2.0. The beta of assets, Ba, varies according to the percentage of stocks in companies' portfolios. This percentage has been as low as about 20% and as high as about 40% in the post war period. Fairley (1978) assumed Ba was a weighted average of a stock beta of 1.0 and a bond beta of 0.15. Under these assumptions Ba varied between .32 [= .2(1) + .8(.15)] and .49 [= .4(.1) + .6(.15)] . Our estimate of the average value of $(1-t_i)$ is 0.76. We can combine all these estimates with an s = 2.0 to calculate the contribution of the higher k to B_e: $(1-t_i)\ B_a\ [\ 2.0 - 1.3)s]$.

This suggests that the beta of equity of a company specializing in worker's compensation, all else equal, would have varied between .34 [= (.76) · (.32) · (1.4)] and .52 [= (.76) (.49) (1.4)] higher than for the average insurance firm. If we plug these differences into (6-2) with $r_m - r_f = 8.8$, they suggest, in turn, that the expected return to equity should be from 3.0 to 4.6 percentage points above that for the average company.

One final note is that equation (6-3) also reveals how changes in the premium to surplus ratio also contribute to changes in B and hence in r_e. As an example, our standing assumption is that from 1950 to 1970 the industry operated at premium to capital ratios about .5 lower than during the 1970's. Taking $B_u = 0.4$, k = 2.0, and $(1 - t_i) = .76$, a reduction in s of 0.5 would lower the expected return by as much as 3.3 percentage points when $B_a = .49$ or as little as 2.1 percentage points when $B_a = .32$.

Estimates of the Cash Flow Timing

A.M. Best Loss Development Data[1]

The tables below give the schedule of actual payments of losses in recent years for stock and mutual companies. The numbers in the first row, for example, are percentages of the estimated total losses from 1974 premiums which had been paid by the end of each year from 1974 through 1979. These are country-wide data.

Table A-1: Stock Companies

LOSS & LOSS EXPENSE PAYMENT DEVELOPMENT										
Year Losses Were Inc'd	Paid Loss & L.E. Ratio at End of:					Percent of Incurred at End of:				
	12 mos	24 mos	36 mos	48 mos	60 mos	12 mos	24 mos	36 mos	48 mos	60 mos
1974	24.4	45.5	58.3	63.2	67.5	32.4	59.2	70.0	77.4	80.2
1975	23.0	43.9	55.3	62.4	67.4	31.3	56.6	68.1	74.1	77.9
1976	22.9	43.3	54.4	61.5	--	30.8	55.3	66.0	74.2	--
1977	20.5	38.2	47.5	--	--	28.0	51.3	63.2	--	--
1978	19.0	38.0	--	--	--	26.2	49.4	--	--	--
1979	19.3	--	--	--	--	26.9	--	--	--	--

Table A-2: Mutual Companies

LOSS & LOSS EXPENSE PAYMENT DEVELOPMENT										
Year Losses Were Inc'd	Paid Loss & L.E. Ratio at End of:					Percent of Incurred at End of:				
	12 mos	24 mos	36 mos	48 mos	60 mos	12 mos	24 mos	36 mos	48 mos	60 mos
1974	24.3	48.4	60.8	68.2	72.9	32.2	60.8	71.9	77.8	81.0
1975	22.9	46.1	58.3	65.7	70.7	30.7	58.3	69.3	75.1	79.3
1976	22.2	43.7	55.3	62.9	--	29.3	54.5	66.1	73.2	--
1977	19.7	39.0	50.2	--	--	25.5	50.3	64.1	--	--
1978	18.6	36.7	--	--	--	24.3	49.0	--	--	--
1979	18.5	--	--	--	--	23.8	--	--	--	--

These data can be used to calculate the lag between premiums and losses under the assumption that losses in any year are paid

[1] Source A.M. Best and Company, Casualty Loss Reserve Development, Selected 200 Companies -- Based upon 1979 Annual Statement Schedule P.

at the mid-point of the year. Since the data extend only to five years we also assume that all losses outstanding at the end of the fifth year are paid six months later. This assumption seems to err in the direction of understating the time lag since surveys from specific states indicate that loss payments stretch out beyond a decade.

In our calculations we used the loss development for 1975, the latest year for which five years of data are available. Using 1975 losses also has the effect of understating the cash flow compared to later years. This is because the Best data show a clear trend toward slower and slower loss payment from 1974 to 1979.

Tables A-3 and A-4 calculate the average lag in loss payment under these assumptions for both types of companies. The weighted average is 2.33 years using total estimated losses as weights (76.2% for stock; 23.8% for mutual). The true investment opportunity is reduced somewhat by the fact that all premiums are not received at the beginning of the policy year. Harwayne[2] estimates that the average delay in premium remission is 105 days (or .29 of a year). This reduces our estimate of the period of the cash flow to 2.04 years.

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[2] op. cit., p. 31. Premium receipt is slower for workers' compensation than for other lines since premiums are not fully established until the insured companies' payroll has been audited.

Table A-3

Average Lag in Payment for Stock Companies*

(1) Years from Beginning of Policy	(2) Percentage of Losses Paid During Year	(1)x(2)
.5	.307	.154
1.5	.276	.414
2.5	.110	.275
3.5	.058	.203
4.5	.042	.189
5.5	.207	1.139
		2.37

Table A-4

Average Lag in Payment for Mutual Companies*

(1) Years from Beginning of Policy	(2) Percentage of Losses Paid During Year	(1)x(2)
.5	.313	.157
1.5	.253	.173
2.5	.115	.288
3.5	.060	.210
4.5	.038	.171
5.5	.221	1.216
		2.215

Mr. LAFALCE. Mr. Weber, do you have questions?

Mr. WEBER. On the top of page 3 of your testimony you go into a proposal, that the committee consider risk retention groups for workers compensation similar to those Congress allowed for product liability insurance.

Can you just explain that to me in simple English?

Mr. HUNTER. One of the competitive options that large employers have to private insurance is to self-insure. Then, of course, you retain the investment income for your own account and the like. There are a lot of advantages to self-insuring.

That is not a really viable option for a small business to undertake alone. However, if you had 30 or 40 small businesses all doing a similar type business, there is no reason why they couldn't get together and form a group and then self-insure all or part of their risk, perhaps up to a certain level, and then buy insurance above that level.

Now, that option is not available because of State laws that forbid such groups. When Congress considered that anticompetitive law in the context of product liability, it decided it was time to strike it down and to allow such groups to form, and they called them risk retention groups, risk retention is another way of saying self-insurance.

What I am suggesting to Congress is, if it was good enough for product liability, why not workers comp, and why not auto, and why can't all of us in this room just get together and decide we want to insure our private passenger autos and go to a company and secure a lower price? I think that would introduce a great deal of competition.

You will find group policies are marketed for much less overhead than individual policies. Group health policies, for instance, typically pay between 85 to 95 cents on the dollar. Individual health policies pay only something like 50 or 60 cents. So there is significant cost savings.

The laws in place are intended to protect the inefficient, and that is something that I think Congress should look at.

Mr. WEBER. Thank you. I don't have any further questions.

Mr. LAFALCE. Thank you very much.

Our next witness was to be the Illinois insurance commissioner, but because of the closing of National Airport in Washington last night, he was unable to come in. So we will insert his testimony in the record at this point.

This testimony is extremely relevant and incisive. Commissioner O'Connor has submitted a very cogent and persuasive argument in favor of increased competition in this particular marketplace.

[The prepared statement of Mr. O'Connor follows:]

PREPARED STATEMENT OF PHILIP R. O'CONNOR, PH. D., DIRECTOR OF INSURANCE, STATE OF ILLINOIS

Mr. Chairman and members of the subcommittee, thank you for this opportunity to address a topic of genuine importance to business in the United States.

Millions of smaller U.S. employers are trapped in an unfair system of cartel pricing of workers compensation that deprives them of the fundamental economic opportunities of shopping by comparing prices and of making full use of the current investment power of their own money.

Failure by the States and the insurance industry to move promptly to a competitive pricing system for workers compensation will likely invite Federal intervention.

If the history of Federal involvement in insurance is any guide, we could expect Federal intervention to work comp pricing to have its own inadvertent and disastrous consequences.

The existing legal system for pricing workers compensation insurance in most States, including Illinois, runs counter to every principle and practice of economic activity in this country.

If one accepts the competitive ideology of this country then it is impossible to logically advocate continued Government sanctioning of price-fixing agreements, especially when it is clear that competitive forces would give employers a better deal.

It is unhealthy and damaging to our economy for a $25 billion-a-year business to price its product by an agreement among the hundreds of sellers—insurance companies—as to what price to charge and then to seek Government approval, enforcement and protection for that agreement to adhere to a single price.

The additional insult to the small employer who is prevented from shopping for a better price since he won't have access to many of the price reduction schemes available to larger employers, is the virtual impossibility that any system of price adherence can give the buyer a fair share in the investment value of his insurance premiums.

No matter how sophisticated a model we may develop, there is no way that a price-fixing scheme can fully account for the investment yield that will come from a dollar collected today but paid out over a fourteen to twenty year period.

Numerous invalid arguments would be offered to Congress and State legislators for not going to a competitive system. These arguments break down into those that are trivial or insignificant, irrelevant to the issue of price competition, or when closely examined are actually arguments in favor of price competition.

The fact is that model legislation adopted by the National Association of Insurance Commissioners recognizes and completely deals with the significant questions that have come up.

First is the argument that in substance says "We have always done it this way." That isn't good enough for the public, legislators, and regulators who are not satisfied with things the way they are.

Second, some have argued that competitive pricing would undermine the integrity of the data system considered important to workers comp. Of course, there is nothing whatsoever to prevent a requirement that insurers report losses according to a common, approved statistical plan. This could even be the case if insurers priced coverages according to a different classification system established for marketing purposes. In fact, the legislative measures proposed in Illinois and Arizona have stronger provisions for maintenance of the data base than do current laws.

Third is the argument that, because workers compensation coverages are specifically mandated by law, then the price should somehow be administered by Government. Unfortunately for those who hold this view, a common product is considered an important component of a price competitive system.

Fourth, there is an expressed concern over solvency in a price competitive system. This is a misplaced concern belied by the experience in other competitive lines and the fact that insurers in a price competitive system would not be straight-jacketed into a price schedule.

Fifth is an argument that has some elements of the solvency argument and is that small companies will find it difficult to participate if there is competitive pricing. This argument is made although small companies apparently survive in other competitive lines. It also smacks of a protectionist attitude that might tolerate excessive prices solely to maintain participation in the market.

Sixth, there is the claim that competitive pricing will cause insurers to cease providing various services, particularly in the area of loss control. It is my opinion that such services are not likely to suffer in a competitive system and may even be enhanced by a focus on loss control to help cut prices.

Seventh, when all the other arguments fail, we are told that there is no need to make work comp a competitive line because it is already competitive due to the prevalence of backside dividends. If this argument is true, then there is widespread illegal rebating going on in that the dividends must be promised up front in order to constitute price competition for consumer patronage. Also, if true, it would seem to strongly suggest that the laws should be changed to reflect reality.

Eighth, there is the claim that discussing price competition diverts attention from what the critics of the bill are calling the real problems of workers comp. This is an insulting argument that implies that regulations, legislators, insurers, corporate and other consumers are intellectually incapable of dealing with more than one issue.

Finally, the ultimate political argument will be that somehow smaller employers will lose a subsidy now built into the system for them. In fact, there is no evidence whatsoever that there is any such subsidy. Rather, the smaller buyer has no options available to him. If there is to be a subsidy, then it should be explicitly provided through an open public policy decision.

As far as workers compensation and competition are concerned. The burden of proof is not on those who would propose minimal government interference in pricing, but rather on those who advocate continued government pricing.

It is not change that must be justified, but rather interference, control and cartelization that must be justified.

Mr. LAFALCE. Has Mr. Johnston, the chairman of the Ohio Industrial Commission, arrived yet? [No response.] He is scheduled to fly in this morning.

We will then call upon the executive director of the American Bar Foundation, Mr. Spencer Kimball.

TESTIMONY OF SPENCER L. KIMBALL, EXECUTIVE DIRECTOR, AMERICAN BAR FOUNDATION

Mr. KIMBALL. Mr. Chairman, and members of the subcommittee, I am Spencer Kimball, executive director of the American Bar Foundation, and professor of law at the University of Chicago. Neither of my employers, however, is responsible for my opinions.

I have been seriously studying insurance regulation for a quarter of a century and have written several books and scores of articles. As a younster, I worked in the office of my father, then an insurance agent, later for 2 years for an insurance company, have served as hearing officer for insurance departments, have appeared as a witness before congressional and legislative committees and, as an expert witness in court, have acted as drafter of insurance codes, and as a frequent consultant.

I first address your second question, Mr. Chairman, whether rates established under open competition would be in the public interest. I proposed a use and file law very close to open competition, for workers compensation a dozen years ago. I was soundly thrashed in the Wisconsin legislative process by the insurance companies.

I shall not say that I was clearly right and they clearly wrong, or that open competition is the clearly appropriate solution. I believe it to be the best, but the answer is not clear. Underlying the view that open competition will produce prices that fairly compensate insurers for the risk to their capital is the assumption of perfect advance knowledge of costs. This is unjustified for the costs are not fully known until long after the coverage period. Further, even to estimate costs, there must be an adequate data base of claims costs on a uniform classification system. It can be maintained by compelling comprehensive reporting of claims, but for practical purposes, that is almost the same as setting a standard pure premium. Free competition is, then, essentially limited to the expense and profit portion of the premium.

It is argued by some that the price of workers compensation insurance for small business would rise under free competition. The reason is that under a regulated rate system small business, is said by some, tends to be subsidized by bigger business. If so, it is a positive good to eliminate the cross-subsidization. That is an argument

for, not against, free competition. Subsidies should be direct, not concealed in premium rates.

Other arguments made against open competition are that it would reduce the incentive to engage in cost-saving efforts, that small insurance companies would be disadvantaged, that monopolistic practices would develop. None of these interrelated arguments are sound.

In summary, if a decision had to be made today on whether to have open competition or continue an administered pricing system, I would argue that open competition would better serve our society. But final judgment is premature. The States should experiment. Workers compensation has long been under tight regulation. Some States should experiment with open competition, some with a use and file system, and some should continue the present system. A decade from now we may know better the comparative merits of the systems.

Mr. Chairman, under open competition investment income is automatically taken into account. I now assume continuation of a rate regulatory regime and go to your first question, whether the inclusion of insurer investment income in workers compensation rates is needed.

The answer is yes. The hard problems are subsumed, however, under the additional question "how." The issue has been discussed for over half-a-century. Many thought it settled long ago that investment income would not be taken into account where statutes provided for "a reasonable underwriting profit." If a reasonable underwriting profit is permitted, how do you justify attention to investment earnings? Because the reasonableness of underwriting profit depends on investment earnings. A reasonable underwriting profit is one that fairly compensates the insurer for the use of its capital and the risk to which the capital is subjected. It allows a fair return on the invested capital, given the riskiness of the business.

To determine a fair return, all income must be taken into account. What is a reasonable return on invested capital? This is for a financial analyst to say. A competent one testifying before me last year in an Illinois hearing thought that, given the risk involved, a reasonable return on equity would be 18 or 22 percent, depending on whether one assumed an 8- or a 13-percent inflation rate. As a rough approximation, that will do for now.

The next question is how much the investment earnings are. One can simplify the problem by making three assumptions—none realistic. First, that the investment strategy of all companies is alike. Second, that the strategy does not differ as between assets representing shareholder contributions—capital and surplus—and policyholder contributions—technical reserves. Third, that the strategy does not depend on the mix of lines of business of the company. Without these unrealistic assumptions, the next problem cannot be solved.

Because rates are made by line of insurance and by State, the investment earnings must be allocated to line and to State. It is easy to allocate earnings on reserves if you assume uniform investment strategy, but capital and surplus and investment earnings on

them must also be allocated by line and by State. That is difficult, even if you assume uniform investment strategy.

Capital allocation should depend on the volume and the riskiness of the particular line of business in the particular State. One must make simplifying assumptions. The easiest, but not necessarily the best, is to assume a 2 to 1 ratio of premiums to capital and surplus and ignore actual capital and surplus. After allocating reserves and capital, however one does it, one must decide what rate of interest to use. Some recent rate hearings have dealt with this problem simplistically. They have assumed the insurance company invests solely in riskless investments like Treasury securities. Unfortunately, those interest rates vary weekly.

In my written testimony I have exposed the fallacy in this simplistic approach. A less naive approach is to take average earnings on actual recent investments of insurance companies, but that has its own defects.

Deciding the rate of interest does not exhaust the hard problems. The methodology to use is the most difficult problem of all.

Three different methods suggest themselves. One is to continue the traditional type of underwriting profit formula, but periodically to calculate the actual rate of earnings on equity and adjust the permitted level of underwriting profit accordingly.

A second, rather gross, method is to ignore investment income except that derived from loss reserves, and to discount loss reserves to present value at an assumed rate of interest. This predicts investment income rather than takes account of it after the fact.

The third, a more esthetically satisfying method, is to build investment income into a sophisticated model by refining the methodology now used by the National Council on Compensation Insurance.

After setting a target rate of earnings on equity, and choosing a rate of investment earnings, one discounts all flows of cash into and out of the system. The computations would be complex, but a model could be developed by actuaries and economists. None exists now.

I will summarize, Mr. Chairman. If shareholders are asked to put their money at risk in an uncertain world, there is much to be said for letting them make their own guesses about the future. This is opting for open competition, but adopting this solution at this time is making a leap of faith. Open competition may solve all problems, and it may not. I repeat, it is too soon to choose definitively. Some States should experiment with open competition, others should try different methods of working investment income into rate formulas under a regulatory regime. In a decade or two, we may know better what solution is really best.

This hearing will help bring some of the problems into better focus for further study. I respectfully suggest that no one yet knows enough to say with confidence what the answer ought to be.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Kimball follows:]

Prepared Statement of Spencer L. Kimball, Executive Director, American Bar Foundation

INTRODUCTION

Mr. Chairman and members of the subcommittee, my name is Spencer L. Kimball. I am Executive Director of the American Bar Foundation (the research affiliate of the American Bar Association) and Seymour Logan Professor of Law at the Unviersity of Chicago. Neither of the two institutions that employ me is responsible for any of the opinions I express. Neither takes positions on issues; but both, as academic/research institutions, give members of their staffs complete freedom to express their own opinions, if honestly and responsibly held.

I have been engaged in the study of insurance law and insurance regulation as a major academic activity for over a quarter of a century. Before that I had experience in several different capacities in the insurance business. I grew up as the son of an insurance agent and spent much time in my father's office; later I worked from 1940–43 for the Hartford Accident and Indemnity Company in San Francisco in several departments. When I began teaching law in 1949, I naturally gravitated quite early into the insurance area. Since the early 1950's I have been continuously engaged in it.

I have written, edited several books, and scores of articles, some of them seminal in the literature of insurance law, and others of no great import. I have completely revised the insurance code of Wisconsin and I am presently engaged in a similar revision of the insurance code of Utah. I have held many hearings for the insurance departments of Illinois and Michigan on different subjects. The hearings include several major rate hearings on workers compensation insurance rates. Some of my opinions in those hearings have led to institutional changes in the business. I have testified many times before congressional committees, legislative committees and on occasion entire legislatures on insurance matters. I have served many times as an expert witness on insurance questions, both for and against insurance companies, sometimes in court and sometimes only in preliminary proceedings. I have consulted on insurance questions for compensation for many clients, some of them insurance companies. That consultation has often taken the form of opinion letters which have been submitted to insurance departments or courts as relevant to matters before them.

I have declined to appear or participate about as frequently as I have accepted employment, for I have been fully cognizant of the continuing value of my reputation for independence. I have rejected all opportunities unless I was completely free to express my own views. While I respect the role of the advocate and the need for the advocate in our system of law and government, that is not my role. The opinions I express are those I myself hold.

As I understand it the purpose of this hearing is to explore certain general questions that were formulated in the letter you wrote me, Mr. Chairman, as follows: "The Subcommittee would appreciate your views on the need for inclusion of insurer investment income in worker compensation rates, and whether rates established under open competition would be in the public interest."

As thus formulated, the questions are impossible to answer with confidence at this point in history. It is not even clear to me that the questions as thus formulated are the right questions to be asked. My testimony will be directed less to the provision of definitive and final answers on either of these questions or subjects than to the effort to help formulate appropriate questions for further study and research. I suspect also that some experimentation with different approaches to the subject will be useful or even necessary before anyone can answer with justified confidence the large questions that you have put.

I shall discuss these two broadly formulated issues in reverse order. First I shall address the question whether rates established under open competition would be in the public interest and after that shall discuss the need for inclusion of insurer investment incomes in the rates.

WOULD OPEN COMPETITION BE IN THE PUBLIC INTEREST?

Prior to the establishment of workers compensation laws, the barriers to recovery by an injured employee against an employer were very high. For practical purposes, the traditional common law defenses of the fellow servant rule, the assumption of risk rule and the contributory negligence rule barred any recovery by the injured employee except in quite unusual situations. On those rare occasions when the employee could recover, however, the damages that could be recovered were not limited by any special rules; occasionally the judgment might be for substantial amounts,

including general damages (pain and suffering). It was a constitutionally permissible trade-off, therefore, when in return for the abolition of the traditional defenses and thus the assurance of recovery for industrial accidents on a schedule of modest dimensions, the worker gave up any right to full and unrestricted recovery in a common law tort action. In addition to the change in the law, the requirement of the statutes that the employer be insured or a qualified self-insurer came close to guaranteeing to the worker a solvent defendant from whom to recover.

The underlying reason for the enactment of workers compensation laws was a strongly held feeling, which is still the conventional wisdom, that fault was irrelevant in the workplace—that the price of commodities and services to the ultimate consumer should reflect as accurately as practicable the actual cost of the production of those goods and services, including as a cost the loss of earnings and medical expenses resulting from injury on the job. Through the workers compensation laws combined with the insurance system that cost has in part been factored into the cost and therefore the price of goods and services. While in the late twentieth century many no longer feel that prices should always reflect actual costs, that is still the basic principle on which our economy operates.

If prices are to reflect costs with reasonable accuracy, employment needs to be classified with reasonable accuracy for the pricing of workers compensation insurance. Some classification of work such as climbing around on the steel framework of skyscrapers under construction are inherently very risky. The construction of a large building (or the digging of a tunnel or the mining of coal, etc.) can be expected to take a substantial and almost predictable toll in injuries and even in lives. The costs that should be passed on through the insurance rates to the ultimate consumer of the product will need to be very high. At the other extreme, the ordinary office worker sitting behind a desk runs a negligible risk of injury; the cost of injury resulting from such activities that needs to be passed onto the price to consumers of that service is very small. I wish to make the point here that the classification of risks needs to be quite accurate if the general principle of having the consumer of goods and services pay for their costs is to be fully implemented.

Systems of administered prices, with careful and regulated classification, in a period of substantial monetary stability virtually assured the insurance industry that it could operate profitably and the worker that there would be little risk of inability to collect in the event of injury on the job. Within the insurance industry the system of administered prices through a prior approval rate regulatory system provided for many decades a stable and secure and relatively prosperous workers compensation insurance industry; it also provided rates that seemed affordable to the employer.

Certain changes in the climate of our society in recent years have resulted in fairly drastic changes in the situation of workers compensation insurance. While in an ideal world the worker should under the system receive compensation for injuries exactly equivalent to all out-of-pocket expenses and loss of income, that has not been attainable. The schedules were relatively low and have become lower as the value of the dollar declined. On the other hand, workers compensation payments as replacement of income have become free from Federal income tax. So long as the compensation schedules were extremely conservative, injured workers were in low tax brackets, and injured workers were the sole wage earners of the family, this created no problem. Indeed, the modesty of the schedules kept the payments from being adequate and left much incentive to get back to work as soon as possible. Recent developments have resulted in basic changes in the incentive structure, however. One change has been the increasing number of situations in which injured workers provide only one of two (or more) incomes in a family, with resulting relatively high incomes. Further, the process of inflation has pushed many members of the classes mainly protected by workers compensation into ever higher income tax brackets, and finally, there has been a recent tendency in workers compensation law to increase levels of compensation toward what in personal injury law would be called "the more adequate award;" in workers compensation law it provides income that often approaches and may even exceed the after tax income that would be received by working. There are instances where because of the tax break and the dual income situation, workers compensation benefits may exceed the income lost or at least be sufficient to make returning to work unattractive. These factors have led, in the opinion of many, to a situation in which there has been an increasing tendency for workers to malinger. One need not believe that there is much conscious dishonesty in order to believe that such malingering occurs, and often. It is natural for illness or injury to continue longer than it otherwise would if the need to earn income is not pressing.

There has also been a quite extraordinary inflationary trend in medical costs, a significant though not major element of cost in workers compensation.

All of the above factors have created upward pressure on workers compensation insurance rates to the point that prediction of the proper rates for workers compensation insurance has become difficult and approval of adequate rates sometimes difficult to obtain from regulators. There is a positive development factor in almost every situation, so that the actual runoff of costs exceeds even supposedly realistic loss reserves. This has been thought to be the case for a decade or more so that a line of insurance business that was once thought to be very stable and reasonably profitable has in the view of many insurance men become unprofitable and quite risky.

I return to emphasize the basic principle that the prices of products and services should reflect all the costs that are involved in their production. This is and should be translated into the proper costing of workers compensation insurance, often an important component of the cost of the products and services. Insurance rates in this field as in others should be cost-based with as much accuracy as possible.

HOW DOES ONE ACCURATELY ACHIEVE COST-BASED PRICING IN WORKERS COMPENSATION INSURANCE?

Assuming perfect knowledge of costs, the classic and undoubtedly correct way to achieve pricing that will compensate the entrepreneur appropriately for the capital he puts at risk and repay the costs involved in production is a system of free and open competition. This has recently been proposed for workers compensation insurance with some vigor by a large segment of the insurance regulatory fraternity and the insurance industry. I proposed it myself over a dozen years ago in connection with the revision of the Wisconsin insurance laws. At that time I was soundly thrashed in the legislative process by the insurance companies who wanted to continue an administered pricing system they believed to provide them a stable and profitable market. While I am less confident than I then was that open competition in workers compensation will come close to providing exactly appropriate rates, I am still inclined to adhere to my position that it is the best system. There are a number of problems that need to be discussed, however.

First, the assumption underlying the naked propsition stated above is that there can be perfect knowledge of costs. That is an unjustified assumption in any portion of the economy. It is least of all justified in insurance where the costs are not fully realized until long after the price is not only determined but paid. This is especially true when we consider that the time cost of money is an important element of insurance cost (a negative element of course but still an element of importance). Uncertainty about interest rates in the future has become a knotty problem in calculating costs of coverage. Cost is, therefore, a prediction of things to come based on past experience which is not a very reliable predictor for even the short term future. While this is true to some extent in other fields as well, even where the product is produced before sale and some costs are completely determined, it is most clearly true in insurance because substantially all the costs are not only not measurable until after the price has been set and often fully received but also many of the costs are not at all within the control of the producer—the insurer—which must simply pay what it is billed. The escalation of medical costs is one illustration of an element of workers compensation insurance costs that is totally outside of the control of the insurers. There is, in my opinion, no practicable way in which insurers can have a significant effect upon the level of those costs. There are others who have a more positive view than I about the amount of control insurers can exercise. I leave that as an open question for consideration in a more appropriate forum.

Further, the classification of rates in the workers compensation field is extremely important even in a competitive market. Such classification depends for its accuracy upon the maintenance of comprehensive records of claims costs so that price relativities can be established at the time that workers compensation rates are set. Even if the total cost is largely guesswork, the relative costs of various kinds of worker activities is much less so. The loss of comprehensive information for establishing price relativities has been advanced as an argument against open competition in workers compensation, in my judgment totally without reason. It is quite possible for the state regulatory regime to insist upon the keeping of accurate claims cost records to produce classification schedules without exercising any direct control over the rates themselves.

Another argument advanced against open competition in workers compensation is one that should be of particular interest to your committee. The argument is that open competition would increase the cost of insurance to small business and reduce

it to big business, in the process increasing the residual market. The argument is that open competition would free insurers to charge for expenses (not claims) in accordance with actual cost as well as to give cash flow advantages to big premium payers. If this is true in a free market, it would indicate to me that the administered price system has probably provided a subsidy for small business at the expense of big business and that open competition will free the companies to price their products more nearly in accordance with actual costs. Whatever one thinks about the desirability of supporting and encouraging small business, that is something that should be done by government by explicit decision and by direct subsidies rather than by imposing upon the insurace business the obligation of cross-subsidizing small business by hiding the subsidies within the rate structure. If government does subsidize it need not do so with actual outlays of cash but can give tax credits and use other devices. Whatever one feels about giving special help to small business, I consider that irrelevant to the kind of workers compensation regime that should be established. Workers compensation rate regulation should not be a device for providing subsidies. It follows, therefore, that the correction of existing subsidization and its elimination in a regime of free competition would be a positive good; it is no valid argument against freeing the insurance companies to compete.

An argument advanced before me in a recent workers compensation rate hearing in Illinois against open competition was that small insurance companies would be disadvantaged. It is ironical that the position was advanced by the largest workers compensation insurer in the nation. I am sure that such generosity is appreciated by the smaller companies but one should receive it well sprinkled with salt; the argument might better be made by the small companies themselves if it is indeed justified. I doubt its verity, for the way small companies will survive in a competitive market (as I think they can) is by finding a particular niche that they can fill better than a larger company that must operate on a less selective basis.

An argument was also made to me, again in my opinion not a meritorious argument, that open competition would reduce the incentive for insurers to engage in cost saving efforts through engineering inspections and advice and educational activities, among other things. The notion seems to be that such cost containment activities are undertaken with "fat" in the rates, which would only be available in a system of administered prices. If so, it suggests that the activities are not cost-beneficial. There is economic justification for cost containment activities only if the total cost of industrial accidents is reduced at the margin just as much as is being spent at that point to reduce them. If there is "fat" in rates which is being spent in cost containment beyond that point, neither the fat nor the expenditure is economically justified. If it is socially justified, it should be compelled by mine or factory safety laws, or by OSHA, rather than by pseudo-economic incentives. The problems with compulsory safety activities should then be explored in a debate on OSHA and like statutes, not in one on insurance pricing.

I come finally to the question whether open competition, so called, would lead to monopolistic or oligopolistic practices in the industry. One needs only to look at the number of insurance companies active in the workers compensation field to believe that such a fear is unjustified. If there is any major portion of our economy in which competition now flourishes it is insurance. The number of units in the business is enormous. Some are large and some are small. In Illinois alone, perhaps 200 insurance companies are engaged in workers compensation and several hundred more could easily enter it if they felt it was profitable to them. Entry into the insurance business is comparatively easy and it is especially easy to add an additional line of insurance if one is already in the business, if one can see the prospect of profit in doing so. Nor, apart from the administered pricing system itself, are there indications in recent decades within at least the main stream of the insurance business that there are combinations to control prices. The insurance business in the seventies and eighties is not what it was in the thirties and the forties.

On the whole, therefore, it seems to me that it would be desirable to have open competition in the workers compensation insurance field. It continues to be necessary to keep accurate records of claims cost on a prescribed and uniform basis and to make the data easily available to the industry. The preparation and dissemination of pure loss costs would under that system be the appropriate activity for the National Council on Compensation Insurance or similar organizations active in the field. That is necessary to give statistical credibility to the experience and thus to justify the classifications used. The determination of the loading for expenses and profits could be left for determination by each company independently. I recognize fully, however, that there is no solid proof based on experience that such a regime of open competition would succeed or that it would provide the best environment for the satisfactory operation of workers compensation insurance. The best of all possi-

ble outcomes for the moment would be to have some states experiment with open competition while some continue with an administered pricing system in the form of a prior approval law. A decade or so from now one might with more confidence than now assert which works best in all cases or, indeed, whether each has its place in different environments. What I do strongly hope will not occur is that the Congress of the United States will make a decision for the country as a whole on the kind of inadequate evidence now available. Holding such hearings as this one to illuminate the problems involved in workers compensation rating is a useful undertaking for your Committee. It may stimulate further dialogue and research. The time is not ripe for the passage of federal legislation, if it ever will be.

I reversed the order of the questions that you put, Mr. Chairman, for a simple reason. If there is open competition in workers compensation insurance rates, investment income is automatically taken into account in the setting of rates. I can go farther. Even within the framework of an administered pricing system, there are some ways in which to engage in a degree of competition that permits a company to take account of investment income in setting premiums. There are retrospective rating plans, in some states schedule rating permits judgment variation in rates from the approved level and, above all, a considerable de facto freedom exists to vary the dates at which premiums are collected. Whoever holds the cash has the benefit of investment earnings.

IS THERE A NEED FOR INCLUSION OF INSURER INVESTMENT INCOME IN WORKERS COMPENSATION RATES?

I come now, Mr. Chairman, to the first of the two questions that you asked me to discuss. I assume now, of course, an administered pricing system—a rate regulatory regime. The question is by far the more difficult of the two because of the complexity and apparently simple question and a straight-forward answer *conceals. As you* have put it, I would give a simple answer to the question. I would say "yes, by all means, insurer investment income should—indeed must—be included in workers compensation rates." That statement, however, does not even begin to suggest the difficulties that now face us if my answer is accepted. One only needs to ask "how" to enter a treacherous mine field. I shall attempt to explore briefly some of the parameters of a few of the questions to be investigated under the following general headings:

1. The general theory.
2. The reasonable rate of return on equity.
3. The way investment income is earned.
4. How investment income should be allocated to lines and states.
5. The rate of interest that should be used in attempting to work investments earnings into the rate formula.
6. The methodologies to be used to get investment earnings into the rate formula?

THE GENERAL THEORY

The propriety of considering investment income in calculating rates has been discussed for half a century or more. No satisfactory and agreed way of dealing with the matter has yet been developed. The traditional formula, arrived at long ago by state legislatures, was to provide for certain criteria that should be taken into account in calculating rates. One of them was that there should be an allowance for a "reasonable underwriting profit." There seems little doubt that the persons who achieved victory by including the word "underwriting" in the formula rather than simply stating that there should be a "reasonable profit" thought that they had forever buried the question whether investment income should be taken into account. The question has surfaced frequently nevertheless. In a workers compensation rate hearing that I held some years ago in Illinois, a state that has used the language "reasonable underwriting profit," I made the following statement:

* * * Illinois has clearly made the choice to allow a reasonable margin for underwriting profit, without direct regard in that margin to income from investments. But the word "reasonable" keeps the issue open in an indirect way, for what would be a reasonable underwriting profit in a line of insurance business that produced no large amount of unearned premium reserve and a very small or nonexistent loss reserve might be grossly excessive in a line of business that produced large quantities of both. (Hearing Officer's Opinion in Hearing No. 1598, Illinois Department of Insurance, pp. 50–51.)

The then Insurance Director of Illinois, Mr. Richard Mathias, adopted my opinion as his own. Since then the legislature of Illinois has, in very ambiguous language, required the reporting of information about investment income in connection with

workers compensation rate filings. Although the new law is not clear as to whether investment income is now to be taken explicitly into account in calculating rates, neither is it clear why the legislature would require investment income to be reported, even in part, unless somehow it was to be used in the rate making process.

I can suggest, however, what I think a "reasonable underwriting profit" means. A reasonable underwriting profit is one that fairly compensates investors for supplying the capital necessary to support the insurance market. It compensates them for the use of the capital and for the risks to which the capital is subjected. There are essentially two ways to determine what that reasonable underwriting profit is. One, which can only be used if one expects there to be a competitive and efficient market if open competition were allowed or required, is to free the rates from regulation and let the market determine what the rates shall be. The other, to be used in the absence of confidence in a free and open market, is to try to stimulate an efficient market in the rate calculation process. I have already discussed the possibility of providing a free market. Here I am concerned with the process of simulating that market in the rate calculation process if rate regulation continues. Either approach would, however, have to abandon (or reinterpret) the "reasonable underwriting profit" as the guide and use an approach that examines the adequacy of the rate of return on equity, for the keystone is the attraction of just enough capital, but not too much, to the support of the enterprise. This answers one of the questions that constantly arises in the discussion of the use of investment income in rate making. As a fallback position, those insurance men who would opt for the position that investment income should be altogether ignored in the rate making process, and some arbitrary allowance of a percentage of "gross sales" substituted as the "reasonable underwriting profit," is to say that at most, if investment income is to be taken into account, it should be only investment income on the portion of assets contributed by policyholders. The assets contributed by shareholders (i.e., the capital/surplus) belongs to the shareholders, they say, and therefore it is not proper to take it into account in determining what investment earnings should be worked into the formula. But that notion is a false one. In large part because the time-price of money is so crucial in insurance, it is not even plausible to define a "reasonable underwriting profit" as some arbitrary percentage of "gross sales." A "reasonable underwriting profit" is one that allows a fair return on the invested capital. Investment on all assets must obviously be taken into account.

That the industry itself, at least in the voice of its more enlightened spokesmen, recognizes that this is the correct position is to be found demonstrated in the following quotation from an impeccable industry source:

"The ability to face another period of underwriting hardship with composure arises primarily from the new perspective insurance managements and most analysts of the industry have adopted in their view of underwriting losses. This perspective allows them to regard a deteriorating underwriting situation calmly because there exists an element in the operating statement which assures that overall earnings will be good. The marvel is investment income, the dominating factor today in determining an insurer's operating result. . . . The strength of the market for property/casualty insurance stocks despite widely predicted underwriting reverses demonstrates that investors are ignoring underwriting in favor of the bottom line. . . . Just since 1970, investment income has shot ahead in dollars by 3.6 times; more importantly, as a percentage of earned premiums it has in the same time span risen by 2.6 points to 9.2 percent as of the end of 1978. By the end of this year, investment income will be close to 10 percent. . . . Insurance company investment income is rising faster than premium income, faster than losses, faster even than inflation. It is a magic answer to nearly all financial problems. . . . Investment income . . . adds tremendous muscle to a favorable underwriting result, and it has the power to make a report that carries a 105 percent combined loss and expense ratio seem respectable. (Best's Insurance Management Reports, Nov. 5, 1979.)

WHAT IS A REASONABLE RETURN ON EQUITY?

If what is required is a return on equity that attracts enough but not too much capital into the business, it must be determined by reference to the economy generally and by what a reasonable rate of return is in businesses comparable in the respects that are important, especially riskiness. This is not a question for a lawyer but perhaps for a financial analyst. I only report here what a highly qualified financial analyst specializing in insurance stocks had to say in my recent hearing. He thought the property-casualty insurance industry was of above average riskiness in relation to other major industries, that within the property-casualty insurance business workers compensation was of average riskiness when compared with other

lines of insurance business, and that Illinois workers compensation business was more risky than the same line in other major states. His sources of information about the comparative merits of illinois and other states had some detectable weaknesses, but only a purist in methodology would criticize his method severely. On the basis of his above conclusions he estimated that 18 or 22 percent would be a reasonable return on equity for workers compensation insurance in Illinois, depending on whether one assumes an 8 percent or a 13 percent inflation rate.

It must be noted that his calculations were all based on an assumption that the appropriate relationship of capital/surplus to loss reserves (approximately equal to premiums) was 1:2. Without far more elaborate evidence and economic analysis than was presented in that hearing there is no solid basis for supposing that 1:2 is the appropriate amount of capital to be assigned to workers compensation insurance. It would depend on many facts not in evidence. I have used the ratio in my further discussion, however, purely for the purpose of making my discussion more concrete than it would otherwise be.

THE WAY INVESTMENT INCOME IS EARNED AND HOW IT SHOULD BE ALLOCATED

Investment income is generated by assets, not by liabilities or capital. Particular assets do not ordinarily correspond to particular items on the right hand side of the balance sheet.

On the right hand side of the balance sheet, above the line, there are basically three kinds of liabilities: prepaid or unearned premium reserves, loss reserves and miscellaneous liabilities. The third category, miscellaneous liabilities, is generally no more than 5–15 percent of total liabilities. (Cormick L. Breslin and Terrie E. Troxel, Property-Liability Insurance Accounting and Finance 18–19 (American Institute for Property and Liability Underwriters, Malvern, Pa. 1978).) For present purposes I shall ignore miscellaneous liabilities.

Unearned premium reserves represent assets that in a non-technical sense belong to policyholders, loss reserves represent money belonging to the company (i.e., the share holders) but owed in a general sense (and not without contingencies), to policyholders or to third party claimants pursuant to the terms of insurance contracts and statutes. Thus, it is money payable either to or on behalf of policyholders and in an attenuated sense also "belongs" to policyholders.

If a distinction is to be drawn in treatment between policyholder contributed and shareholder contributed funds, the true shareholder contributed funds must be ascertained by making some important adjustments to these reserves because of artificial insurance accounting methods. In particular, (1) the peculiarities of insurance accounting result in what is often called the "equity in the unearned premium reserve." That is properly a part of surplus and should be transferred there before ascertaining the true amount of shareholder contributions. Further, if the experience of the company proves to be worse than was assumed to the rating formula, the loss reserves will be in excess of the amount predicted in that formula. That excess also should be regarded as shareholder contributed funds for it will have to be made up out of surplus. Once these and similar adjustments are made, the assets will have been allocated between policyholder contributed funds and shareholder contributed funds.

Even if one takes the approach that I have urged above, of including all investment income in the calculation of rates, it is still important to distinguish between policyholder contributed and shareholder contributed funds, for two reasons:

a. The investment strategy that is used by an insurance company or by the industry in general is not necessarily the same for both. Some regulatory systems insist that the policyholders' money, i.e., the technical reserves, should be invested more conservatively than the capital investment of the shareholders; in other systems, the opposite view prevails. If there is or should be a distinction between the two basic sources of funds for investment because of divergent investment strategies, we need to know with some accuracy how the capital and surplus is to be allocated not only to lines of business but also to states. One must keep in mind that insurance shareholders have invested in an insurance business, not in workers compensation as such, nor even more particularly in workers compensation in Illinois. But for some calculations the allocation must be made.

b. Even without statutory requirements that there be different investment strategies management may be influenced in its investment policy by the differences between capital/surplus and other finds, or by differences between lines of insurance. With some kinds of insurance, notably life insurance, management may try to match liabilities as closely as possible with particular assets.

In conclusion of this portion of my brief exploration into the knotty problems of the use of investment income in workers compensation rates, I summarize as follows: If one assumes that assets are invested using different strategies, depending upon whether the assets represent shareholder or policyholder contributed funds, especially if one also assumes that assets are invested differently in different lines of business and even in different states because of variation in the riskiness or other characteristics of the business in those states, one has created a problem that is probably not solvable, at least now. It is better if one ignores any complications in investment strategy and assumes that it will be uniform for all companies, whatever the mix of lines of business, and whatever the mix of assets between liabilities and capital/surplus. I shall so assume in the remainder of what I have to say, however far that may be from reality. If we do not make such an assumption, we have made the problem too complicated to solve at all.

HOW CAN INVESTMENT INCOME BE ALLOCATED TO LINES AND STATES?

If one makes the simplifying assumption that I have just made, however contrary to fact it may be, it is then possible to approach the next step in the process of using investment income in rate making. That step is the allocation of investment income among lines of business and among states.

Property/casualty insurance companies file with their annual statements a so-called insurance expense exhibit. In that exhibit, they are required to break down the premium income, losses and expenses by lines of business. One can assume that with sufficient accuracy for present purposes it does allocate those items among the lines of insurance. We can therefore ascertain for our purposes what the figures are for premiums and losses for workers compensation by states. With less accuracy we can also ascertain expenses for each line of business by state.

But rates are and should be made on a state by state basis. Economic circumstances are different from state to state. Under the present regime, laws differ from state to state. Even if a uniform law were unwisely to be enacted, its implementation would be different from region to region or state to state. Whether it be state or federal, an industrial commission or its counterpart sitting in Chicago will produce different results than one sitting in Pierre or Bismarck.

Even if one assumes that it is easy, by assuming the accuracy of the insurance expense exhibit, to allocate premiums, losses and expenses by line of business, and perhaps not much more difficult to allocate them by state, the problem of allocating capital/surplus to either lines or states is a far more tricky undertaking.

One must recall that the purpose of capital/surplus is to provide the necessary support for the business. The amount of investment varies across lines and across states depending upon the characteristics of that portion of the business. To illustrate, one line of business may be very stable and impose little risk upon the business. Such a line needs little capital to support it. Another line of business may be quite variable and contain also the possibility of catastrophic losses. Such a line requires much more substantial support by capital/surplus. In the Illinois rate hearing mentioned above, there was testimony that Illinois workers compensation insurance business was substantially more risky than in other major states. Then more of a company's capital/surplus should be allocated to it than is allocated to the same line in other states.

To clarify the point, capital protests against three kinds of risks:

(1) First, there is the investment risk in the insurer's portfolio of assets. This is dependent to a large extent on the insurer's investment strategy and is insurer-specific. The more speculative the investment strategy the greater is the need for capital for a given volume of business.

(2) Second, there is a risk of inadequacy in the insurer's loss reserves, i.e., in the status of past business in the company's accounts, creating a second need for capital.

(3) Finally, there is the risk of inadequacy of present rates. This risk and the previous one are similar except as to time of incidence.

The investment risk is in part a function of investment strategy, and the other two risks are in part functions of lines of business, which vary from very stable to very volatile.

How much capital should be attributed to workers compensation? Solving this problem is at least difficult. Only single line insurers invest capital in a single line of business. Others invest it in a whole insurance business, and the book of business may be very complex. When a particular line of business is not sufficiently profitable, there will be a tendency to reduce that portion of the business by being more selective in underwriting or even by reduction of involvement in that line of busi-

ness. If the profitability is high, underwriting rules may be relaxed and aggressive efforts made to increase that line of business. In extreme cases, an insurer may withdraw from a line altogether. But only for total withdrawal from a line is it possible to think in more than a notional sense of the withdrawal of capital from or the addition of capital to a specific line of business. Nor is it possible easily to ascertain what portion of its capital a particular insurance company considers (or a regulator should consider) to be invested in a particular line of business. If forced to make a statement about the allocation of its capital, presumably an insurer could do so by making artificial assumptions. Even more gross and arbitrary assumptions must be made to ascertain for the line as a whole—the level at which rate regulation takes place—what capital lies behind and supports workers' compensation, or any other line.

How much invested capital should then be attributed to each of the different lines of insurance. Actual invested capital might simply be allocated in proportion to reserves. That makes the problem easy but is a distortion of reality. Another approach is to apportion capital in relation to expected losses and loss adjustment expense. That also is simple but simplistic. The more risky kinds of business should have greater support in capital investment than the less risky kinds.

The witnesses in my hearing who made some effort to deal with the allocation of capital and surplus did so by such simplistic assumptions. There has been an assumption for decades in the insurance business that sound operating policy requires one dollar of capital and surplus for each two dollars of premium in the workers compensation line. The same ratio has been applied to many other lines. While this ignores the differences among the many lines included in that broad category, and ignores the differences among the states in the riskiness of business, and ignores the difference in the riskiness of the operations of particular insurers, and ignores the different riskiness of various investment portfolios, and ignores the differences in the specific patterns of operation of individual companies, it is nevertheless a way the problem can be made simple enough to solve. One can simply assume that for each two dollars of premium there is backing it up one dollar of capital and surplus. Never mind that an examination of the balance sheet of a company or the balance sheet of the whole industry shows that the company or the industry is actually writing at one to one, or three to one, or six to one. The assumption can be made and used to solve this complicated problem. It is not clear, however, what one does with the excess or deficient capital.

Another way to approach the problem was used, not in as sophisticated a fashion as one would have liked, by the National Council on Compensation Insurance, in the recent Illinois hearing. The Council allocated among the lines and among the states the assests contributed by policyholders in proportion to the reserves. Then the assets representing the shareholders' contribution, i.e., capital/surplus, were allocated proportionately to expected loss and adjustment expense. In the exhibits that followed this basic assumption some errors were made. But the approach is arguably defensible, for it makes the problem simple enough to solve. It is, nevertheless, unrealistic. It ignores the comparative riskiness of lines of business or particular states. Take, for example, the situation, easy to contemplate, where a line of business is stable but has a high loss ratio. The expected loss and loss adjustment expense will be high relative to premium income and the Council's method would allocate it a large amount of capital. Because the business is not very risky, the capital needed is relatively low. Another line of business with a much lower loss ratio might be extremely risky and require more capital. This is ignored in any simplistic formula such as the two that I have described. Let some such assumptions be made, however, for if we are to deal with investment income in the calculation of workers compensation insurance rates, we have to derive some numbers to use, whether they be accurate or not.

WHAT RATE OF INTEREST SHOULD BE USED?

It is the recent high rates of interest to be earned in cash equivalents or on new investments in the bond markets that has suddenly increased the demands for the consideration of investment income in the rate making process. The facile assumption is made that insurance companies can earn obscene levels of profits through the investment of assets, their own and those belonging in some sense to the policyholders. If investment income is to be taken into account in the rate making process, what rate of earnings should be used?

The approach taken to this problem, even by people of considerable sophistication, is often simplistic. It has been said, for example, that insurance companies can safely invest in treasury securities and that they should therefore be charged with

the rate of earnings that could be obtained on such riskless investments. Unfortunately, however, that assumes that we know what those rates will be when investments are actually made. The premium rates must be set at a particular point of time, but be applicable to a period that usually runs from three to fifteen months after the rates are approved. Who can say with any degree of confidence when a rate filing is made what interest rates will be on treasury bills fifteen months or more later? From testimony provided to me in the recent Illinois rate hearing, I illustrate the difficulty in determining the appropriate interest rate to use in setting the premium rates for workers compensation. While the treasury bills that one would purchase in order to match the pay-out pattern of loss reserves would have a wide range of maturities, from a few days to many years, for illustrative purposes it is sufficient to choose one year bills. The following information will illustrate the problem:

In August 1974 the rate on one year bills was 8.88 percent. In February 1975 the rate had dropped to 5.56 percent. In September of the same year the rate was 7.20 percent. By January 1976 the rate had again dropped to 5.44 percent. After a rise to 6.12 percent in June 1976, the rate went down to 4.64 percent in December 1976 but had risen to 6.52 percent by the next year end. Thereafter, as the inflationary psychology took hold, the shag line moved upward fairly steadily, reaching 14.03 percent in March 1980. In April, however, the rate began to plunge again, to 7.54 percent by June. In the week ending November 28, 1980, the rate was again up to 13.22 percent. That was the last date of the exhibit in the hearing.

Suppose a rate filing had been prepared on the suggested basis in August 1974, using a return of 8.88 percent. A policy written early in the period for which the rate was effective, with loss reserves discounted at that rate, might have produced a considerable amount of premium income to be invested in February, at 5.56 percent. The company's discomfiture would have decreased somewhat when it invested some of the premium income in one year treasury bills in September at 7.20 percent. But the audit premium received in January 1976 would have to be invested at 5.44 percent. A policy written late in the year during which the rate filing was to be effective might produce initial premium income to be invested at 5.44 percent in January and audit premium to be invested at 4.64 percent in December of 1976. I have picked for illustration an extreme period that would hit the insurer hard. The variation might have comparable impact in the other direction, with the discount rate on loss reserves being low and the rate on treasury bills being high. That would have been true for a filing based on the treasury bill rates of June 1980. But perhaps my point is made. The rate on treasury bills at various maturities matching the payout pattern is obviously no panacea. It is no answer to the difficulty to say that insurers would have come out well over most of the last several years because they could have invested at rates that usually exceeded the assumed rates. I have shown that even in this inflationary period that is not necessarily true. Moreover, however pessimistic one may be about the prospects, it is not impossible that inflation may be brought under control and riskless security interest rates be reduced toward the pure value of money with complete disaster to insurers whose premium rates were calculated on the basis of 1981 interest rates.

It may be suggested, however, that the insurance companies could lock in available interest rates at the time the premium rates are set. That would require an awesome additional capital investment or else major involvement in the interest futures market, with a good deal of speculation on the book of business yet to be written. Both are objectionable. Perhaps one could reduce the problem somewhat by providing in the rate filing a formula that would adjust premium rates weekly to vary with the market in government securities. But that does not fully solve the problem, for premium income in workers compensation does not come in when the policy is written. It comes in over time, some of it well after the completion of the policy year for which the policy is written, i.e., more than a year later. Unless the premium rate is to be adjusted periodically during the policy year, an impractical suggestion, the approach of tying premium rates to riskless investments in treasury securities turns out to be unworkable.

If the interest rate that can be earned on riskless securities cannot be used, then what rate of interest should be set? There is much to be said for the approach followed by the National Council on Compensation Insurance in the recent hearing. The Council examined the historical earnings of insurance companies on invested assets and used an average figure for a number of recent years in the proposed calculations of premium rates. That rate turns out to be quite modest. It would have been better if the most recent years had been included or their absence justified, however. Although I was not fully satisfied with the testimony and the exhibits presented by the Council, it seemed fairly clear that the average rate of earnings before

taxes for the years used was in the range between 6 and 8 percent before taxes; after taxes it would have been somewhat less.

I do not have any neat solution to the question that I asked at the beginning of this section of my testimony. I shall only repeat the question: How are we to determine what interest rate to use in taking account of investment earnings in the calculation of workers compensation insurance premium rates?

WHAT METHODOLOGY SHOULD BE USED TO APPLY THE INVESTMENT EARNINGS IN THE CALCULATION OF PREMIUM RATES?

Once one has determined a rate of interest to use, whether from the historical experience of insurance companies as a group, the historical experience of particular companies, some artificial numbers calculated in some way from the rate of interest obtainable from riskless investments over a reasonable period of time, or in some other way, how does one use it?

One methodology is to test the appropriateness of the traditional rate making formula which sets a certain (artificial) rate of underwriting profit on gross premiums as the standard. While 2½ percent has long been accepted by default as appropriate in the workers compensation line of insurance, there is no reason that new estimates could not be made based upon more recent information about the economics of the industry. One can study the rate of earnings on unearned premium reserves in workers compensation, the payout pattern on loss reserves, the amount of loss reserves existing in the characteristic company in relation to premium income, and then calculate the investment income that should be earned by a company at the set rate of interest. One can next calculate the investment earnings on the capital/surplus needed to support the business, simplifying that calculation by assuming a 2 to 1 underwriting ratio of premiums to capital. When one is done with those computations, one can say, artificially, that in workers compensation in the 1980's, an underwriting profit allowance of −2.3 percent is appropriate, for automobile bodily injury insurance a +4.3 percent underwriting profit is appropriate, and in automobile property damage insurance perhaps a 0.6 percent underwriting profit allowance is appropriate. (The numbers are taken out of the air, of course.) This is the approach recently followed in one state in a series of rulings on rate filings. For reasons stated above, I think this approach simplistic and unsatisfactory, nevertheless it is a possible solution to the problem. One would thus use investment income as a test to determine what numbers to use in the traditional type of formula which allows a certain percentage of profit on "gross sales." If one is realistic in the interest rate assumed, perhaps this is as good an approach as any, however simplistic it may be.

A more complex but aesthetically more satisfying approach would be to build investment income into a formula of the type used currently by the National Council on Compensation Insurance. This should be no more difficult in principle than to calculate trend factors or develop historical premiums and losses to current levels or many of the other manipulations of data that the Council goes through in presenting a rate filing for approval. Using historical data for some period agreed upon between the Council and the regulators to set an appropriate target rate of return on equity and an assumed rate of earnings on investments, all streams of money could be discounted to present value to determine the percentage of rate increase needed. The calculations are far beyond my capacity to make though I think not to understand, for I think a competent actuary and a competent economist working together could both make the calculations and explain them clearly. If my judgment, or guess, on the understandability of the calculations is wrong, this solution may not be practicable, and grosser approximations must be used.

I have already described one: the testing of the traditional formula for appropriateness under current conditions. Another that should be easily practicable is to consider only the investment income from loss reserves and, using the assumed rate of interest, to discount all loss reserves to present value in calculating premium rates. Certain loss reserves are already discounted in the present methodology. This method would merely extend that practice to all such reserves. While this would not account for earnings on unearned premium reserves or on capital/surplus, given the figures that appeared in the recent Illinois hearing, it would take account of approximately two-thirds of all investment income, and nearly all of that derived from policyholder contributed funds.

This approach, of discounting the loss reserves, requires development of an accurate knowledge of the payout pattern. The model that one would develop is one that would begin to look like the actuarial model for life insurance. One would be discounting future flows of cash in and out of the business (with particular emphasis

on the flows out) and readjusting the traditional methods by writing the reserves down to present value. This method has the appearance of simplicity but it involves, as do all other methods, the selection of an appropriate rate of interest.

These several methodologies are possible, in many variations. It is conceivable that some methodology can be developed that would receive a reasonable degreee of agreement among the parties concerned.

SUMMARY

The use of investment income in the calculation of workers compensation premium rates, as I saw it in the hearing that I held recently for Illinois, proves to be extremely difficult. I had before me witnesses of sophistication. There were economists, actuaries, financial analysts, and others with much experience in the insurance business. Not only did they see the matter differently but almost all of them made errors of significance in the use of the numbers with which they were working. Those errors were not apparent during the course of testimony but became evident in my examination of the exhibits after the hearing. The problem proves, it seems, not to be a simple one, even for the experts. It requires skills the lawyer and the legislator do not have. It needs more skill among other experts than was readily apparent in the hearing I held. It needs agreement on facts about which agreement may not be possible. It may, indeed, be an unsolvable problem except in the sense that ultimately the insurance regulator has the final say by disapproving filed rates that do not use satisfactory assumptions or methodology. While it may be possible to achieve, eventually, reasonable agreement on the controverted questions, eventually may be a long time from now. Meantime, vast sums of invested capital are at risk in the workers compensation insurance business. Capital is at risk in the underwriting process; it is at risk in uncertain securities markets.

CONCLUSION

If shareholders are to be asked to put their money at risk where all the factors are as uncertain as here, there is much to be said for letting them, rather than legislators or regulators, make the guesses on the basis of which the calculations of risk and return are made. While I believe it to be profitable to continue to study the problems involved here, I also believe that it would be useful to experiment with freeing the market, allowing those who put their money at risk to make their own guesses on the future course of events. The complexities of the problem involved in bringing investment earnings into the rate making process tends strongly to reinforce my original inclination, stated earlier, to believe that open competition is the best approach in workers compensation insurance. If one cannot predict a stable insurance market and stable securities markets and therefore cannot set rates that will surely provide an adequate but not excessive return for the entrepreneur, then perhaps the entrepreneur should set his own prices in a market as competitive as it can be made to be.

If a single solution is to be reached at this time, I think the balance of the arguments calls for that solution to be the open competition solution. I repeat, however, that I think it would be unfortunate for the Congress to impose a single solution at this time. We do not know enough about what would happen. It would be a leap of faith to opt for open competition everywhere. It would be better for the states to experiment with various approaches—the prior approval approach, the file and use approach, the open competition approach. A decade or more down the road, we may know enough to solve the problem uniformly and with more confidence that we are solving it correctly.

Mr. LAFALCE. Thank you very much, Mr. Kimball, for your excellent testimony. Anyone would have to say it was extremely objective and you tried to present both points of view, or all points of view, on every issue that was posed to you. For that we appreciate your testimony very much.

I think we are in basic agreement. We are not suggesting any Federal action, but we are suggesting that this is a matter of nationwide concern and that a congressional inquiry perhaps could help to focus attention on some real issues on a nationwide basis. That is one of the reasons that I do intend to call for the GAO study of the varying State experiences. I think it will be very help-

ful to take a look. That is also why I am glad we do have a diversity of experiences right now.

I think it is fair to say that you believe that open competitive rating would be good in workers compensation, not without difficulties, but that you are not ready to reach that judgment conclusively for each and every State. Is that a fair summary of your position?

Mr. KIMBALL. Yes, sir, that is a fair summary. I really think the ultimate answer is open competition. I think it is much too difficult a problem and we don't know enough about it as yet for us to reach that conclusion for uniform adoption. Workers compensation has simply been under tight regulation simply too long for us to be sure what would happen if we let go.

Mr. LAFALCE. Are you aware of any facet of workers compensation insurance that would argue against its being subject to open competitive rating?

Mr. KIMBALL. None that persuades me. The arguments that are advanced, it seems to me, are not really persuasive. One is that there would be a reduction in the efforts made to control costs. Engineering services, which were mentioned by Mr. Hunter, the cost-containment efforts after the accident, efforts to control medical costs, for example, my view is——

Mr. LAFALCE. I would think they would increase rather than decrease. What's your opinion?

Mr. KIMBALL. One of the arguments is that insurance companies would cease making any effort to control medical costs after the accident has occurred. My own view on that—and here I disagree with Mr. O'Connor—is that workers compensation insurers really don't have enough leverage in the health area to have much effect on health costs anyway, and that that part of the cost-containment effort is really not very important.

Reduction in engineering costs, engineering studies, and assistance to insureds, it seems to me, should not be reduced at all under open competition, for the reason that to the extent that they are cost effective, they reduce the ultimate outlay of the insurance company and would be engaged in anyway.

Mr. LAFALCE. Mr. Kimball, some individuals from the insurance industry have stated to me that open competition would destroy the statistical data base.

Mr. KIMBALL. I think, Representative LaFalce, that is simply nonsense. The States have the authority to compel the submission of information on whatever classification basis they want, and whether or not they control the rates, they can continue to insist upon the information.

Mr. LAFALCE. In 1973 there was an NAIC task force on worker compensation insurance. That 1973 report stated, "It would only be by the greatest coincidence that the same numerical value, a 2.5-percent profitability factor, would be exactly correct in 1949 and in 1973, and in every year in between."

Now, would you care to comment on that statement and the fact that many States continue to utilize that 2.5-percent profitability factor in their ratemaking process 9 years after the 1973 report and some 30 years after the 1949 establishment of that percentage factor?

Mr. KIMBALL. I think that that is largely attributable to inertia. The statement that was made is certainly true. Of our underwriting profit 2.5 percent would not be appropriate in 1981. Indeed, it is likely that a negative underwriting profit, a combined loss-and-expense ratio of well over 100 percent, would be justified in 1981. Exactly what it would be, I don't know, but it would be well over 100 percent. Five years from now it is possible 2.5 percent may be too small.

Mr. LAFALCE. Mr. Weber, did you have any questions that you would like to ask?

Mr. WEBER. I was interested in some of your comments on Mr. Hunter's testimony. Do you support the repeal of the antitrust immunity of the McCarran-Ferguson Act, for example?

Mr. KIMBALL. No, sir, I do not, for reasons that are not necessarily related to this particular issue, to workers compensation rate problems.

Mr. WEBER. Do you support an investigation by the GAO to review the State antirebate laws, fictitious group laws, cartelized ratemaking and other anticompetitive actions, as Mr. Hunter suggested?

Mr. KIMBALL. As a long-term academic, a career academic, Mr. Weber, I support any kind of research that is competently done and that will throw light on the problems. Some studies by Federal Government agencies have been very ably performed and some have not. I would hope that this one would be well done if it is undertaken.

Mr. WEBER. Do you agree with his statement that the six States that have monopolistic State funds are the most efficient, or that the most efficient system is the monopolistic State funds system?

Mr. KIMBALL. I think that that is a question that would require an awful lot of investigation. One would need to know the extent to which the monopolistic State funds have appropriate reserves for future payments. That is something that I do not know myself. I think it would have to be looked at.

It is very easy in the insurance business, if you're operating on a pay-as-you-go basis, to look very, very good, indeed, but then, if the business stops growing and the losses continue to have to be paid, you go broke very fast.

I recall in particular the American Military International Insurance Association, the AMIIA, which was an American company doing business only in Europe some years ago, in England, France, and Germany. It was selling automobile insurance to GI's abroad for about half the rates that were applied by domestic companies to local citizens. It was tremendously successful for a number of years. Ultimately it went bankrupt with serious harm to our foreign relations with those three NATO partners.

Mr. WEBER. Thank you very much.

Mr. LAFALCE. Thank you.

Mr. Kimball, I earlier stated that Mr. O'Connor from the State of Illinois, the director of insurance for the State of Illinois, could not attend because of the cancellation of flights into National last night. I introduced his testimony into the record. I would like to quote just a small portion of his testimony now and ask if you would care to comment on it. OK?

Mr. O'Connor says, and I'm quoting now:

Millions of smaller United States employers are trapped in an unfair system of cartel pricing of workers compensation that deprives them of the fundamental economic opportunities of shopping, by comparing prices and of making full use of the current investment power of their own money.

Failure by the States and insurance industry to move promptly to a competitive pricing system for workers compensation will likely invite Federal intervention.

If the history of Federal involvement in insurance is any guide, we could expect federal intervention in workmen's compensation pricing to have its own inadvertent and disastrous consequences.

The existing legal system for pricing workers compensation insurance in most States, including Illinois, runs counter to every principle and practice of economic activity in this country. If one accepts the competitive ideology of this country, then it is impossible to logically advocate continued Government sanctioning of price fixing agreements, especially when it is clear that competitive forces would give employers a better deal.

It is unhealthy and damaging to our economy for a $25 billion a year business to price its product by an agreement among the hundreds of sellers—insurance companies—as to what price to charge and then to seek Government approval, enforcement, and protection for that agreement to adhere to a single price.

The additional insult to the small employer who is prevented from shopping for a better price, since he won't have access to many of the price reduction schemes available to larger employers, is the virtual impossibility that any system of price adherence can give the buyer a fair share in the investment value of his insurance premiums.

No matter how sophisticated a model we may develop, there is no way that a price-fixing scheme can fully account for the investment yield that will come from $1 collected today but paid out over a 14- to 20-year period.

Numerous invalid arguments would be offered to Congress and State legislators for not going to a competitive system. These arguments break down into those that are trivial or insignificant, irrelevant to the issue of price competition, or when closely examined are actually arguments in favor of price competition.

That is all I will quote from his statement, but I wonder if you would care to comment on that. I thought it was a very powerful statement on his part, and I'm sorry that he couldn't be here with us this morning, as I am very sorry Commissioner Markman from Minnesota couldn't be here.

Mr. KIMBALL. Yes; I would be very glad to comment on it.

I think any difference between us may be mainly a function of the difference in the ages of Mr. O'Connor and me. I would tend to agree with most of what he says, not necessarily all but most, but I have a great deal less confidence than he does in the power of his arguments. Things don't always work out in practice as they would seem to in theory, and I simply am not as sure as he is that what he says will work out that way because there are other factors that he may not have thought of that may prevent it.

Mr. LAFALCE. Maybe the President needs you as one of the counterweights to his supply side advisers, Mr. Kimball. [Laughter.]

Well, I have no further questions of you at this time. Any further questions, Mr. Weber?

Mr. WEBER. No; I don't.

Mr. LAFALCE. Thank you very much, Mr. Kimball.

Mr. KIMBALL. I have a full statement——

Mr. LAFALCE. Yes; which has already been introduced into the body of the record.

At this point I would like to insert in the text of the record—at that point where I questioned Mr. Hunter, regarding whether he was aware of whether of any attempts that were made to prevent the release of his report, although he was expressly unaware of any

attempts—I would like to read from a letter dated September 30, 1981 and signed by individuals on behalf of the Alliance of American Insurers, the Independent Insurance Agents of America, the National Association of Independent Insurers, the Professional Insurance Agents, and the American Insurance Association.

First of all, we will put in the entire letter and then I will read portions therefrom. It is to the Secretary of Labor, the Honorable Raymond Donovan. It reads:

Dear Mr. Secretary: We are deeply concerned about the impending release by your department of a contractor's "study" on workers compensation insurance ratemaking et cetera, et cetera.

We hope you will halt the release of the study on the following grounds: Insurance ratemaking is a function of State regulation, outside the jurisdiction of any Federal agency. The matter was specifically delegated to the States by Congress through the McCarran-Ferguson Act. The objective to leave the regulation of insurance to the States was re-emphasized by Congress in 1980 when it prohibited the FTC from investigating insurance issues without prior authorization from Congress.

Second, the contract was awarded to Raymond Hill and Robert Hunter without any prior bidding. Hunter, president of the National Insurance Consumer Organization, is an avowed public antagonist of the insurance industry, and could not be expected to produce an objective report. We hope you agree that awarding any contract to special interest advocates serves no good public purpose.

While we appreciate the fact that the National Council on Compensation Insurance, the major workers compensation statistical and rating bureau, has been given an opportunity to comment on the report we question the usefulness and expense of producing a document of such dubious validity.

We would appreciate your looking into the matter and stopping further consideration of the study.

This letter is dated September 30, 1981.

Well, I do think one might characterize that letter as an attempt to suppress the release of the study.

[The letter referred to above follows:]

September 30, 1981

RECEIVED
OCT 5 - 1981
USDL/EEA-OFDA
DIRECTOR'S OFFICE
WASHINGTON, D.C.

The Honorable Raymond J. Donovan
Secretary
Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Dear Mr. Secretary:

We are deeply concerned about the impending release by your department of a contractor's "study" on workers' compensation insurance ratemaking which we feel was improperly awarded in January during the last days of the Carter Administration. One of the two individuals participating in the study has a well documented bias against the insurance industry.

We hope you will halt the release of the study on the following grounds:

* Insurance ratemaking is a function of state regulation, outside the jurisdiction of any federal agency. The matter was specifically delegated to the states by Congress through the McCarran-Ferguson Act. The objective to leave the regulation of insurance to the states was re-emphasized by Congress in 1980 when it prohibited the FTC from investigating insurance issues without prior authorization from Congress.

* The contract was awarded to Raymond Hill and Robert Hunter without any prior bidding. Hunter, President of the National Insurance Consumer Organization, is an avowed public antagonist of the insurance industry, and could not be expected to produce an objective report. We hope you agree that awarding any contract to special interest advocates serves no good public purpose.

While we appreciate the fact that the National Council on Compensation Insurance, the major workers' compensation statistical and rating bureau, has been given an opportunity to comment on the report, we question the usefulness and expense of producing a document of such dubious validity.

We would appreciate your looking into the matter and stopping further consideration of the study.

Sincerely,

Andre Maisonpierre

Andre Maisonpierre, Sr. V.P.
Alliance of American Insurers

Darrell Coover

Darrell Coover, Vice President
Government Relations
Nat'l. Assn. of Independent Insurers

Harold F. Eberle

Harold F. Eberle, Director
Government Affairs
Independent Insurance Agents
of America

Joe Ackert

Joseph Ackert, Chairman
Federal Affairs Committee
Professional Insurance Agents

Bill Suttle

William W. Suttle, Vice President
Federal Affairs
American Insurance Association

Mr. LAFALCE. Now I would like to call to the witness stand the chairman of the Ohio Industrial Commission, Mr. William Johnston.

Mr. Weber, I don't know if you have any introductory remarks you would like to make prior to Mr. Johnston's testimony, but if you do, I would be pleased to call upon you as the Representative from Ohio.

Mr. WEBER. I'm going to be very, very brief. Naturally, it is always good to have an Ohioan with us, Mr. Chairman, and I know we are all looking forward to Mr. Johnston's remarks. I am glad that his airplane could get in on this snowy day.

Mr. Johnston, the floor is yours.

TESTIMONY OF WILLIAM W. JOHNSTON, CHAIRMAN, OHIO INDUSTRIAL COMMISSION

Mr. JOHNSTON. Thank you very much.

Mr. Chairman, honorable members of this committee, if you would permit me, I would like to read from my text. I will probably deviate from time to time from that prepared text, and I would be glad to entertain any questions you may have.

My name is William Johnston and I am presently serving as the chairman of the Ohio Industrial Commission. I have served in that capacity since April 1976.

The Ohio Industrial Commission, together with the Bureau of Workers Compensation, comprises that branch of State government which provides for the needs of Ohio's injured workers.

The Industrial Commission was established in 1913 as a creature of the constitution to operate the State insurance fund for the purpose of insuring that injured workers are compensated for their injuries without the need to resort to the tort or to the courtroom. It is a limited no fault system.

The Commission consists of myself as chairman, Mr. W. Craig Zimpher as the vice chairman and the employers representative on the Commission, and Mr. Leonard T. Lancaster as a member of the Industrial Commission, and the employee or labor representative on the Commission.

In 1954, as a creature of statute, the Ohio Legislature created the Bureau of Workers Compensation. The bureau is presently headed by Mr. Raymond A. Connor, who has been in that capacity for about 2 years.

The difference, the distinction between the two agencies, can be summarized very quickly. The Industrial Commission is sort of the board of directors. We are the people who have the lawyers who conduct the hearings and we personally conduct hearings. We have the doctors and we do the medical exams.

To give you a little idea of our program, we conducted about 100,000 hearings last year, and over 80,000 medical examinations last year. The Bureau of Workers Compensation is the office manager of the system. They collect the money, they pay the bills, and keep the records. They store the files and they pay the rent; they run the office part of the program in Ohio.

As a State-operated insurance trust, we have no stockholders, pay no dividends, we employ no agents, nor do we incur any acquisition costs.

For 69 years the State insurance fund has remained a State-operated insurance trust. By law, the Ohio General Assembly has specifically prohibited private carriers of insurance from competing with the State insurance fund in the business of compensating Ohio's 4.6 million workers, or in collecting premiums from Ohio's 240,000 employers.

Ohio law allows for certain companies who qualify to become self-insurers. But it also provides that we, the Industrial Commission, reserve the right to decide who shall become a self-insurer. We adjudicate their claims and establish subsequent awards in matters of dispute. Consequently, if it has to do with workers compensation in the State of Ohio, we are responsible for it.

We are one of five exclusive State funds in the United States. The others are Washington, Nevada, North Dakota, and West Virginia.

Ohio's system, as an exclusive State fund operation, has been a serious concern for many members of the very competitive insurance industry. In fact, seven attempts have been made over the years to change the law and allow private carrier participation. Most attempts have been made through the legislative process, but no bill has ever passed out of committee to allow this procedure. The latest attempt in 1981 was through initiative petition, attempting to mandate a change in the law through a constitutional amendment. This, like all the other attempts, has failed.

I must believe the reason we have been so successful in turning back such attempts is because we have received support for our program from both the business community and labor. During the last campaign, commonly called issue one because of its position on the ballot, the anti-issue one forces were a coalition of business and labor, including such diverse groups as the Ohio Manufacturers Association, the Ohio Chamber of Commerce, the Ohio Farm Bureau, the Nationwide Insurance Co., and all major branches of organized labor.

This coalition, with many other individuals and groups, helped to defeat the constitutional amendment despite being outspent by 6 to 1. Almost 80 percent of 3 million Ohio voters in this election favored the State insurance fund. In fact, the pro-issue one supporters did not carry one of Ohio's 88 counties. We doubt that this issue will surface again in Ohio, at least in the very near future.

Of primary importance to both labor and business has been the success of our investment strategy. The Ohio State insurance fund is approximately a $3 billion trust fund which provided us with a net income in 1981 of approximately $260 million. Since we are a State-operated agency and not a profitmaking corporation, that income can go a long way towards relieving the financial burden of Ohio's employers while insuring that Ohio's covered workers have one of the Nation's highest benefits.

In fact, Ohio's system, in a recent study—I am referring now to a 1981 report by Alexander Grant & Co., prepared in cooperation with the Conference of State Manufacturers Associations—Ohio ranked fifth in the country in benefits and 41st in the country in

costs to employers. Incidentally, none of the seven States which cost the employers less than Ohio had benefit levels nearly as high as we have. We can therefore conclude that in a cost-to-benefit ratio, no one has a system which exceeds Ohio's.

Mr. LAFALCE. Mr. Johnston, I believe you have a memorandum containing a copy of the study by Alexander Grant & Co.; is that correct?

Mr. JOHNSTON. Yes, sir, I do. I failed to bring the required 75 copies, but I would be glad to supply that.

Mr. LAFALCE. I think that's OK. I think we can reserve space in the record for at least one copy, so we will put it in the record at this point in time.

[The information referred to above follows:]

M E M O R A N D U M

TO: William W. Johnston, Chairman, Industrial Commission
W. Craig Zimpher, Vice Chairman
Leonard T. Lancaster, Member

Raymond A. Connor, Administrator
Bureau of Workers' Compensation

Members of the Workers' Compensation Advisory Council

FROM: Neil E. Webner, Executive Secretary

DATE: February 11, 1982

Fast on the heels of Election Day come two studies confirming the wisdom of Ohio voters. A study by Alexander Grant & Company of the "business climate" of 48 states reports that Ohio has the fifth highest T.T.D. benefit rate and the seventh lowest cost to employers. This 1981 report is consistent with earlier studies showing high benefit rates at low costs to employers. Copies of pertinent pages are attached. The complete report is available from Cindy Hoffman, Alexander Grant & Company, 464-3074.

The second study a risk analyst was published January 18 by Business Insurance and confirms that state fund systems perform more efficiently and at lower costs than private carriers. Copies of the article will be distributed soon.

NEW/mk

Attachments

The Third Study of

General Manufacturing Business Climates

of the Forty-Eight Contiguous States of America

Prepared by Alexander Grant & Company in cooperation with the Conference of State Manufacturers' Associations (COSMA)

1981

Alexander Grant & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS

$10

Grant Thornton International

Alexander Grant & COMPANY

Factor B3: Maximum Weekly Payment for Temporary Total Disability Under Workers' Compensation Insurance

State	National Rank 1981	Regional Rank* 1981	Factor Value 1981
Alabama	7	4/9	$148
Arizona	19	1/5	204
Arkansas	4	1/4	126
California	12	1/3	175
Colorado	35	4/5	245
Connecticut	44	5/6	285
Delaware	13	1/6	175
Florida	31	8/9	228
Georgia	2	2/9	110
Idaho	17	5/9	198
Illinois	47	6/6	376
Indiana	6	1/6	140
Iowa	48	9/9	384
Kansas	11	2/9	170
Kentucky	33	9/9	233
Louisiana	10	4/4	163
Maine	45	6/6	322
Maryland	38	4/6	248
Massachusetts	37	4/6	245
Michigan	15	2/6	181
Minnesota	34	3/6	244
Mississippi	1	1/9	98
Missouri	8	1/9	150
Montana	29	7/9	219
Nebraska	14	3/9	180
Nevada	36	5/5	245
New Hampshire	23 =	2/6	213
New Jersey	18	2/6	199
New Mexico	30	2/5	222
New York	(26)	3/6	215
North Carolina	22	5/9	210
North Dakota	23 =	6/9	213
Ohio	(43)	5/6	275
Oklahoma	9	3/4	155
Oregon	40	3/3	261
Pennsylvania	41	5/6	262
Rhode Island	28	3/6	217
South Carolina	27	7/9	216
South Dakota	16	4/9	191
Tennessee	3	3/9	119
Texas	5	2/4	133
Utah	32	3/5	230
Vermont	21	1/6	208
Virginia	23 =	6/9	213
Washington	20	2/3	205
West Virginia	42	6/6	262
Wisconsin	39	4/6	249
Wyoming	46	8/9	362

	National Rank 1981	*	Factor Value 1981
Averages:			
Forty-eight States			$215
Great Lakes	31		244
Mid Eastern	30		227
New England	33		248
North Central	24		230
South Central	7		144
South Eastern	17		175
South Western	30		229
Western	24		214
Weighting			4.35%
Year of Data			1981

Source: U.S. Chamber of Commerce, Analysis of Worker Compensation Laws, Washington, D.C., 1981.

* This is: Regional rank of the state/Number of states in the region.

= Denotes a tie in rank.

Alexander Grant & COMPANY

	National Rank 1981	Factor Value** 1981
Averages:		
Forty-eight States		$4.29
Great Lakes	26	4.67
Mid Eastern	30	4.79
New England	33	5.28
North Central	15	3.18
South Central	32	4.92
South Eastern	14	3.08
South Western	30	4.70
Western	36	6.08
Weighting		6.26%
Year of Data		1981

Source: Letter from National Council on Compensation Insurance (NCCI) dated 10/30/1981.
Phone inquiries of states not reporting to NCCI.

* This is: Regional rank of the state/Number of states in the region.

** These figures do not take into account any other taxes levied along with WCI. Examples of states which do levy other such taxes based on the WCI assessment are Kentucky, which we understand adds approximately 21% for a special fund for black lung claims and WCI administration, and Ohio adds 24¢ for administration and disabled worker relief.

*** Wyoming has a standard rate for all manufacturers new to the state. This rate decreases after one year by varying amounts depending on claims history.
*** Washington has an hourly rate. For this table, the average hourly earnings for manufacturers, after taking an estimated 10% increase from 1980, was used to compute the rate.
*** North Dakota only assesses WCI up to the first $3,600 of earnings. Their rate was computed taking into account annual average manufacturing wages, increased by 10% for 1981, and average hours worked.

= Denotes a tie in rank.

Alexander Grant & COMPANY

Factor B4: Average Workers' Compensation Insurance Rate, per $100 of Payroll, of Selected Manufacturing Occupations

State	National Rank 1981	Regional Rank* 1981	Factor Value** 1981
Alabama	15	5/9	$3.01
Arizona	37	4/5	5.50
Arkansas	26	1/4	4.24
California	42	2/3	6.27
Colorado	21	2/5	3.86
Connecticut	45	5/6	6.76
Delaware	31	4/6	4.98
Florida	22	8/9	3.91
Georgia	24	9/9	4.07
Idaho	28	7/9	4.49
Illinois	38	4/6	5.83
Indiana	2	1/6	1.23
Iowa	12	5/9	2.67
Kansas	17	6/9	3.55
Kentucky	18 =	7/9	3.57
Louisiana	34	3/4	5.15
Maine	39	3/6	5.95
Maryland	33	5/6	5.05
Massachusetts	40	4/6	5.95
Michigan	48	6/6	8.48
Minnesota	46	5/6	7.28
Mississippi	11	4/9	2.63
Missouri	8	4/9	2.45
Montana	29	8/9	4.84
Nebraska	4	3/9	2.28
Nevada	41	5/5	6.07
New Hampshire	23	2/6	4.05
New Jersey	43	6/6	6.42
New Mexico	35	3/5	5.22
New York	(27)	3/6	4.33
North Carolina	5	1/9	2.31
North Dakota***	1	1/9	1.11
Ohio	(7)	2/6	2.44
Oklahoma	30	2/4	4.89
Oregon	47	3/3	8.39
Pennsylvania	25	2/6	4.11
Rhode Island	44	5/6	6.53
South Carolina	9	2/9	2.48
South Dakota	3	2/9	2.24
Tennessee	10	3/9	2.58
Texas	36	4/4	5.40
Utah	14	1/5	2.86
Vermont	6	1/6	2.41
Virginia	16	6/9	3.12
Washington***	18 =	1/3	3.57
West Virginia	20	1/6	3.85
Wisconsin	13	3/6	2.75
Wyoming***	32	9/9	5.00

Mr. LAFALCE. Please continue.

Mr. JOHNSTON. The Industrial Commission and the Ohio system can provide a dollar's worth of benefits to employees while charging Ohio employers only 84 cents. I must admit, however, it has not always been that healthy. We were faced with an actuarial deficit 6 years ago of $1.3 billion. One of the many areas that was changed to reduce this deficit was our investment policy.

As an aside to that, our latest report was a $200 million surplus.

Over a period of the past 4 years, the Commissioners—that is, Mr. Zimpher, Mr. Lancaster, myself, and Administrator Connor—have seen our policy of broadening our investment base, while divesting ourselves of those items which would not or could not keep up with inflation, bear fruit in great quantity.

During that period, the State insurance fund has grown by over $1.2 billion, from a balance of $1.7 billion approximately to $2.9 billion. The net income has grown from $100 million to over $255 million, a 260-percent increase.

The purpose behind our investment revision policy has been twofold. First and foremost is the actual soundness of the fund, can it meet its future obligations? Second, to help relieve the inflationary pressure that has been building from the ever-spiraling medical and benefit cost levels, as witnessed by the manifold premium increases in almost every other State during the past 10 years.

The policy has been successful enough for the Ohio Industrial Commission and the Bureau of Workers Compensation to be able to provide a separate and major premium rate reduction in each of the past 4 years. In 1978 we granted a 25-percent decrease in premium rates, followed by a 19-percent decrease the next year. In 1980 we provided a 15-percent credit against premiums, and last year we reduced the premiums by a further 3 percent. Those rate reductions have amounted to a savings for Ohio employers of more than $420 million.

During that same period, the legislature has mandated an increase in maximum benefits to injured workers of 27 percent.

The 1981 gross earnings on investment amounted to $287,729,000, or just under a 10-percent return on all investments. Interest income alone amounted to $178,991,000 or 10.37 percent return, while dividends and discounts provided another $108,738,000.

While we were able to take advantage of the inflationary effect of interest rates, especially in the bond market and commercial paper, we also determined the advisability of divesting our equity portfolio of many of the somewhat higher dividend stocks in favor of more rapid growth stocks, thereby expanding our portfolio's base.

The results have been most interesting. While the dividend over all has remained a rather static 4 percent, the value of the equity portfolio has more than doubled. The 1977 base was $324 million, up to a 1981 base of $685 million. As a result, although the dividend rate has remained approximately the same, the actual income to the fund has almost doubled, up from $12 million to almost $25 million per year—a marked improvement in both the stability and income of the equity portfolio.

Our cash position has also improved. It is up from $234 million to $410 million, which provides another $83,976,000 per year in income.

The ultimate purpose behind any investment strategy is simply to maximize income. The industrial commission, the State insurance fund, of course, is no different. The difference comes in what the income from investment is used for. In our case, the investment income is used to offset other costs such as reserve against future losses and claims expenses. In other words—this is an important statement that you need to insert in my previously prepared text—we include the full impact of investment income at an anticipated 7 percent rate of return in the ratemaking formula itself for establishing premiums.

It might also be helpful to know that within the structure of the industrial commission we have incorporated our division of safety and hygiene, and our rehabilitation division.

The safety and hygiene division, operating without enforcement or police powers, has compiled one of the Nation's best records for improving safety in the workplace. Ohio's record for safety can best be measured by the continuing decline in both claims filed—down 30,000 from 1979 to 1980—and the number of lost time incidents in the State—down from 105,373 to 101,568, from 1979 to 1980.

The rehabilitation division, begun only in 1979 by a legislative mandate, has also begun to have a positive effect on Ohio workers. The division's eight regional offices are presently providing services to thousands of injured Ohio workers and in the past months has successfully returned many of them to work in meaningful positions.

I would be glad to provide any further information on these programs or any other operation of the industrial commission that you request, and would be more than happy to answer any questions that you may have.

Mr. LAFALCE. Well, that is a very, very interesting presentation, Mr. Johnston. It appears to be quite a success story. Apparently the voters in Ohio view it as such. I think the continuation of your present system got about 80 percent of the vote.

Mr. JOHNSTON. Yes, sir, 80 percent of the vote.

Mr. LAFALCE. I do have a few questions.

For example, the statistics that you use in determining the value of your equity portfolio compared the base year 1977 to a 1981 base, from $324 million to $685 million. I am just wondering if these different base periods—I mean, was 1977 a low base and 1981 a high? How would it have been if you had used 1980 to 1981, or how would it be if you used 1981 to a projected 1982, or February of 1981 to February of 1982? Could you shed any light on that?

Mr. JOHNSTON. I would have to operate by memory, and I have never asked the investment staff that particular question.

We chose the 1977 base because I came in 1976, in the midst of national news, a national scandal, with fraud and corruption, actuarial deficits, et cetera. We chose 1977 as being the first year that I had a firm grip on the situation

I am sure we would find a less dramatic increase from 1980 to 1981, and perhaps from February to February, depending on which stocks we bought. I know we bought a lot of airlines stock and, in

my opinion, we sold a little late. For a while we had a tremendous increase in the airlines stock, but when we actually sold we didn't realize all of that gain.

I would be glad to supply that information to the committee.

Mr. LAFALCE. I'm just wondering, you know, are you engaged in a dangerous game?

Mr. JOHNSTON. I suppose no more than any other pension fund or insurance company in the country. We certainly are a known factor on Wall Street. We have our own code on the computers and we occasionally make the Wall Street Journal on the volume of the issues that we purchase. We are limited by law to 20 percent of our assets to be invested in equities or high-risk areas, you might say. The question is: Is a stock listed on the New York Stock Exchange a high-risk area, and some are and some aren't, perhaps?

Mr. LAFALCE. Is the unpredictability of investment income, when you have a certain percentage of it invested, say, in stocks, worrisome when you use investment income with such unpredictability as one of the ratemaking factors?

Mr. JOHNSTON. I took a hard look at this in 1976, when I was given constant reports of gloom and doom and imminent failure. At the time I walked in, the assets of the State insurance fund stood at $1.3 billion. We have struggled our way and "gloomed and doomed" all the way up to $3 billion.

I have had constant discussions with the actuarial auditors and the CPA's that are involved in the audits about the interest rate assumption, and for years—in fact, up until 1981 or perhaps late 1980, we assumed a 5 percent return. Even in 1979 and 1980, when we were earning 18, 19 and 20 percent on $800 million in commercial paper.

I don't feel at all risky, assuming that we will earn at least 7 percent on a $3 billion portfolio. As a matter of fact, we have earned considerably more than that.

Mr. LAFALCE. Do you have any comparisons between your 7 percent and the calculations that others are making on their rate of returns?

Mr. JOHNSTON. No, sir, I don't. I know that some private carriers include a factor and some don't. Without having personal involvement, that's the best answer I could give you.

Of course, Ohio being an exclusive State fund, we're the only operation in the State anyway in this area.

Mr. LAFALCE. I have not investigated the complaints, at least thus far, that we have had an unusual increase in the number of workmen's compensation claims over the past several years, but I have heard that statement made often. You State that from 1979 to 1980 you have had an actual decline in both claims filed, down 30,000 from 1979 to 1980, and the number of lost time incidents down from 105,000 to 101,000 during the same time period.

What has the trend been since you've been in office, from 1977? Do you see an upward trend from 1977——

Mr. JOHNSTON. From 1977 to 1978, I believe we had an upward trend, but——

Mr. LAFALCE. Very big?

Mr. JOHNSTON. No. Our claims have been running around 400,000 a year, and our payout for the last 3 years has run between

$500–$550 million per year. We have not seen any tremendous swing either way.

Mr. LAFALCE. OK. So it has been pretty steady, with no big swing up and no big swing down?

Mr. JOHNSTON. Fairly steady. Of course, we have a declining population of workers in Ohio due to our high unemployment. That might be a factor. It is really hard to attribute.

We know for a fact that the actual filed claims are down. The covered employment is down, but not significantly. With 12 percent unemployment, of course, there is a decline in there. But that is only in the last few months, and these are 1980 statistics showing a slight decline.

Mr. LAFALCE. Could you augment your statement with some additional statistics regarding both claims filed, number of lost time incidents in the State, let's say from 1977 through 1980, or whatever you have most recently, and also, could you supplement that regarding total employment levels in Ohio for all those years?

Mr. JOHNSTON. Certainly. We can easly do that. Through our annual reports we can supply this committee with that information.

Mr. LAFALCE. I would appreciate it. Thank you.

I am advised that in Washington State, which also operates an exclusive State fund, that income from investments by the State more than offsets the entire expense of administering their program.

How does the Ohio investment income experience compare with Washington State?

Mr. JOHNSTON. The answer I would have to give you is just Ohio statistics because I am not familiar with Washington's actual statistics.

Mr. LAFALCE. Fair enough.

Mr. JOHNSTON. With a $260 million investment income in 1981, versus a $630 million, approximately, premium collection, we are at a little less than half of our premiums. If we continue to grow at the rate we have, with the exclusion of the disabled workers relief fund, which is a separate area of problems and having nothing to do necessarily with the way the system is operated, but having a great deal to do with the way the laws are drafted, we could eventually receive the same amount of investment income that we do in premium.

We foresee a continuing decline in premium needed to operate our program because of the performance of the investment income.

Mr. LAFALCE. I am also advised that in Washington all firms, regardless of size, are eligible for experience rating. Now, I would think that this could be beneficial to small firms.

How does Ohio compare in this respect?

Mr. JOHNSTON. There is a classic example of the policy-rendering function of the industrial commission. We have rendered the policy since 1976 that we have a minimum threshold for experience rating. We don't allow the smallest employers to have experience rating. They pay what is known as the base rate.

Every one of them, of course, is convinced that if they were merit rated they would save a great deal of money. But our policy has been, by seeing the—all you need is one or two arm-off cases or a

lifetime quadraplegic case and these people are out of business. So as a matter of policy we have established a minimum size for merit rating. Of course, the higher the size, the larger the employer, the higher the credibility factor, or the more that their actual claims influence the rates. That is a matter of policy set by the industrial commission.

Sort of as an aside to this, I think—you have probably seen this happen quite often here—I have never yet had an employer who felt that his rates were too low and volunteered to pay more, or a worker who felt he had gotten too much in benefits and said "here's some back." So you have that constant pressure from employer groups.

In fact, just yesterday I was at the Small Business Coalition meeting in Columbus and they again requested of the legislature a method by which they could reduce their costs. That's a constant problem.

Mr. LAFALCE. I don't know if you were here when Mr. Kimball was testifying a bit earlier. He commented that he thought it was necessary to take a look—or desirable, at least—to take a look at the reserve policies and status of the State monopolies.

What is your opinion of the reserves maintained by the State of Ohio?

Mr. JOHNSTON. As of right now, or as of 1981, I think they are more than adequate. In 1976, I don't believe—I think our actuarial auditor in 1981 indicated that he was incorrect in his 1976 figure of a $1.3 billion deficit. In 1981, looking back to 1976, he believes he overestimated the dire straits of Ohio. However, we took it very seriously in 1976, and called for two-in-a-row 30-percent increases. And yet I, as a member of the Commission—and hearing any expensive claims, all settlements over $6,000 and all lifetime disability, all facial disfigurements, those are heard only by the three members—I was not seeing a tremendous increase in claims. In fact, we cut the permanent totals or the lifetimes about in half in the first year.

So I feel certainly that our assets are more than adequate today.

Mr. LAFALCE. What are they today?

Mr. JOHNSTON. About $3 billion.

February is a collection month; twice a year we collect. So probably about the fourth day of March we will maybe reach $3.2 billion. Then, of course, we start paying out again. So it fluctuates from day to day.

We move and we invest the money $20 to $30 million a day, in and out, in and out, constantly trying to get the best deal we can.

There is the difference—this is something else I ought to mention. The policy was changed about in 1974, before I become chairman. Up until 1974 the Industrial Commission's investment policy was tax-free municipal bonds, paying about 3 percent. It didn't take a brilliant recognition, by a brilliant scientist or scholar, to realize that with all that money you could certainly do better than 3 percent, tax-free municipal bonds. Then the change in philosophy began in 1974.

Had that maintained, had we stayed in the 3 percent or very low paying rates, I don't think we would be in the position we're in today.

Mr. LAFALCE. I have no further questions.

Mr. Weber?

Mr. WEBER. Thank you, Mr. Johnston, very much.

Looking at the Alexander Grant sheet, I was confused, with factor B3. Apparently the maximum weekly payment for temporary total disability is ranked lowest to highest on that sheet-——

Mr. JOHNSTON. Yes. This report was prepared on the theory of business climate, and they felt the higher the benefit, the worse the business climate was. So that's why the numbers are somewhat inversed.

Mr. WEBER. OK.

Mr. JOHNSTON. So the very highest numbers have the very highest rates. Like the 50th would be the highest State of all.

Mr. WEBER. That's what I gathered.

Mr. JOHNSTON. The other way, on costs—it is ranked—the lowest cost would be the best. So the lowest cost would be No. 1, and the highest cost would be No. 50. It is sort of inverse from the way we're normally thinking about it.

Mr. WEBER. Certainly.

I just have a few questions. The safety and hygiene division, if they operate without police powers, what compliance powers do they have? How do they function and how do they secure compliance if they don't have police powers?

Mr. JOHNSTON. That has been a very interesting situation. The employer groups traditionally in the State of Ohio have opposed OSHA and opposed the State department of industrial relations, which does have police power. We have gone through, you might say, a credibility problem. We say we will provide these services to you for free—a safety engineer, a safety inspection, an OSHA preinspection. We'll go over your claims with you one by one, figure out how they happened and how you can avoid them, all for free.

The word got around from the various employer groups that we had this service available, and it is being used extensively now where it was not in the early seventies. Where we have a real significant situation, I am sure the situation is such that OSHA is aware or becomes aware where the employers would not let us in, like they would not let OSHA in, or the department of industrial relations.

One interesting aspect is we have maintained credibility to the extent that in labor disputes, where specifically the union shop steward is saying "this is an unsafe workplace" and the manager is saying "no, it's not," they will both abide by our safety and hygiene decision. We'll send the people in with the equipment and do the tests and say here's what's here, safe or unsafe. Both sides abide by that decision. But it is done on a voluntary basis and primarily through credibility.

Mr. WEBER. And self-interest, it sounds like.

Mr. JOHNSTON. And self-interest, absolutely. Of course, if they are large enough to be in a merit rating situation, and they have a great deal of claims, we have an unusual situation in our ratemaking. Our rates can vary from a 95-percent credit to a 95-percent penalty.

To give you an example, if the base rate is a dollar, a very large but very safe operation could pay as little as a nickel. A very large

but very unsafe operation could pay $1.95. So if you're trying to compete with your neighbor down the road and you're paying $1.95 and he's only paying a nickel, you have a definite financial incentive to make your workplace safe. So that's probably a very large factor in this.

Mr. WEBER. My only other question has to do with your investment policy. Undoubtedly, you have had this question raised a number of times. That has to do with using your investments to plow those funds back into Ohio industry, Ohio residential mortgages, Ohio housing, that sort of thing. It struck me that even with a 3-percent interest rate, if those were in Ohio municipal bonds, the cities of Ohio obviously are receiving a favorable subsidy and there is that aspect of it also.

What is your point of view about investment policy as it relates to Ohio's particular investment needs.

Mr. JOHNSTON. That's a very interesting question, because of the legislature's approach to that. There are two things they have done. First, they have required us to purchase the bonds of the Ohio Building Authority, and through our funds we have purchased and built an $82 million State office tower in Columbus, we are purchasing and building a $65 million State office building in Toledo——

Mr. WEBER. Right.

Mr. JOHNSTON. A $32 million building in Akron; a $35 million building in Cleveland. We have upgraded the National Guard facilities to the tune of about $11 million, and the State fairgrounds to about $3 million, through the Ohio Building Authority requiring us to deal specifically with real estate needs as established by the Ohio Building Authority.

We are prohibited from investing in the real estate market, or providing funds for homebuilding. Most intriguing to me is, there was a bill passed just last year, I believe, to provide that all the pension funds—the teachers, the public employees, police and firemen, the highway patrol—those funds can invest in real estate obligations. We were not included in that legislation. We are still expressly prohibited from investing in the real estate market in——

Mr. WEBER. Do you think that would be wise or unwise?

Mr. JOHNSTON. My personal point of view, if I'm secured enough, I think it would be wise to help the housing industry in Ohio. But my concern is this is a trust fund; the money is here for the workers who may be hurt yesterday but need the money in the year 2000. I have the concern to make sure the money is there to pay them when they need it.

A lot of employers don't even understand why I need reserves at all. They love the pay-as-you-go concept. They would like to see this fund down to about—we pay out $550 million and they would like to see the fund about $600 million and we refund all the rest to them. So that's a constant political problem. So I have that concern and that need, and as a trustee of the fund, I want to make sure, No. 1, the money is there to pay the workers, and No. 2, I try to make the best but the safest investment that I can.

Mr. WEBER. Thank you very much.

Mr. Chairman, my apologies to the other remaining witnesses. I have a problem back at the office and I'm going to have to get back for that.

Mr. LAFALCE. You have been most diligent and we thank you for your attendance thus far.

Mr. Johnston, just one further question. I was intrigued when you commented about the coalition that was put together in opposition to the proposition on that ballot that I think would have basically ended your job and ended the Industrial Commission in Ohio. You stated that there was a coalition formed combining both the Ohio Society of Manufacturers, or whatever it's called. What is it called?

Mr. JOHNSTON. The Ohio Manufacturers Association.

Mr. LAFALCE. The Ohio Manufacturers Association, and all the leading labor organizations in Ohio. So you seem to have business and labor come together.

Business is usually concerned about premiums, and labor is usually concerned about the benefits. Labor wants increased benefits and business wants decreased premiums. Usually the one side is not all that concerned about the other, except that business very often will want decreased benefits.

Do you think the very existence of your fund has helped both sides to see the perspective of the other side and understand the necessity of having decent benefits, minimizing claims to the extent possible and minimizing premiums to the extent possible?

Mr. JOHNSTON. It would take a rather lengthy answer. Let me just begin and do the best I can with it.

Mr. LAFALCE. It was a lengthy question.

Mr. JOHNSTON. First, the constitutional amendment, as proposed, would not have eliminated my job. The Industrial Commission's workload would have increased, because we anticipated more litigation. We would have still been in place. The Bureau probably would have lost clientele—that was the theory anyway—that it would have a fewer number of subscribers to the State insurance fund.

I think the reason we had the coalition—and that included the Ohio Chamber of Commerce, the Farm Bureau, the Coalition of Small Business, the Employee's Actuarial Association, the claimants attorneys, the Ohio State Bar Association, Nationwide Insurance, Motorists Mutual Insurance, Nationwide being the largest Ohio-based insurance company—I think that speaks back to the history of this fund.

Back in 1913 the Ohio Manufacturers Association was created for the purpose of working with labor in the area of workers compensation as a tradeoff, saying "Mr. Worker, you give up your right to sue me in court, and in exchange for that I'll give you a guaranteed payment—not an 'if come'; and I'll give up my common law defenses." So the Ohio Manufacturers Association, and later the chamber of commerce, got involved in this, and the Ohio AFL-CIO—that's the steelworkers and the autoworkers, and then you had the mineworkers and the rubber workers, and they're all very much actively involved in this—for years and years and years taking the posture that we will pay the highest benefits at the lowest possible cost and the way to do that is through this fund. I

think that is why for these many, many years there has never even been a bill out of committee because of the objection and strong opposition of those groups.

I think the Alexander Grant study, certainly No. 5 in the Nation in benefit levels is very pleasing to labor. I'm sure if you had them testify they would like to have us No. 1. But No. 41 in the country in cost to employers is very pleasing to employers, and they would like to have us No. 48. So we have this constant push-pull in the situation.

It was unique in the history of Ohio politics for these two particular groups to join together. They are traditionally, as I term it, snake and mongoose. One says yes and the other says no, and then later on they find out what the issue is. That's just the way they are. But in this particular question, as far as the system goes, they did join together and formed a very strong and active coalition: Not much money, not very well funded, but with a lot of people and a lot of involvement. It was unique in the history of Ohio.

Mr. LAFALCE. Mr. Johnston, I want to thank you very much for coming here to Washington and giving us the benefit of the Ohio experience. We appreciate it.

Mr. JOHNSTON. Thank you very much, Mr. Chairman.

[Attachment to Mr. Johnston's testimony follows:]

ACCIDENT STATISTICS

	1977	1978	1979	1980
Number of injuries reported	115,576	122,801	138,766	124,938
Non-fatal lost days	2,657,838	2,709,491	2,987,825	2,689,076
Average days lost per injury	23.0	22.1	21.5	21.5
Fatalities	256	304	327	209
Disabling injury involving dismemberment, disfigurement or loss of use	1,404	1,547	1,711	1,198
Disabling injuries over 7 days	72,849	79,421	92,901	82,270
Disabling injuries 7 days or less	41,067	41,529	43,827	41,261
Occupational disease	1,115	799	1,143	1,535
Employment	4,504,000	4,670,000	4,739,000	4,659,000

Mr. LAFALCE. Our next witness will be Mr. Lewis H. Roberts. Mr. Roberts is a consulting actuary, employed by the firm of Woodward & Fondiller, New York City.

Mr. Roberts?

TESTIMONY OF LEWIS H. ROBERTS, PRESIDENT, WOODWARD & FONDILLER

Mr. ROBERTS. Thank you, Mr. Chairman.

The draft of my testimony that was previously submitted has since been revised in one respect. The calculations there were based upon what you might call Professor Kimball's second alternative, which was discounting the loss reserves, and since then I have extended them to include the unearned premium reserves, so the amount of investment income is somewhat higher here. So I would like to bring a few copies up to you.

Mr. LAFALCE. Please do.

Mr. ROBERTS. I also brought 75 copies with me.

Mr. LAFALCE. Please proceed.

Mr. ROBERTS. In 1911, at the outset of workmens compensation, there was no explicit provision for underwriting profit and contingencies in rates. The philosophy behind this rested partly upon the feeling that, as a form of social insurance, workmens compensation insurance was not an appropriate subject for private profit, and partly upon the expectation that investment earnings on reserves would provide sufficient additional reward to attract insurance capital to this market.

For 38 years this philosophy prevailed, until 1949, when the National Council on Compensation Insurance filed for a provision of 2.5 percent for "profit and contingencies." This percentage was usual at the time for other lines of casualty insurance, such as automobile and general liability. Subsequently, the percentage for these lines was raised to 5 percent.

The 2.5 percent is standard to this day, although interest rates have increased to where U.S. Treasury issues pay between 14 and 15 percent.

At these interest rates, plus a nominal profit of 2.5 percent, the total financial profit on workmens compensation insurance is approximately 30 percent, more or less, varying between rate classes and between States according to percentages of pension cases and rates of settlement in different jurisdictions.

An exhibit showing the calculation of financial profit is appended hereto.

The national council has maintained in rate hearings that due recognition has been given to investment income in that 2.5 percent would be too small a profit without investment income. Without disputing this, I would say the argument seems a bit brief, considering that zero percent would also be too small.

Under these circumstances it is not surprising that there should be pressure on the insurance industry to give more explicit recognition in ratemaking to the value of investment income by giving up the provision for profit and contingencies or even writing at a nominal underwriting loss.

Minnesota's recent requirement of a 10-percent pro forma underwriting loss has attracted wide notice. I say "pro forma" because the ratemaking formula, by showing premiums and losses both at cash value, although losses are paid long after premiums have been received, does not disclose the true financial profit, which would be about 21.5 percent.

This is as a percentage of premium. Related to policyholders' surplus, it would be 43 percent, assuming the "ideal" 2-to-1 ratio of premium to surplus. By some estimates, this translates to 32 percent of net worth, the latter being taken as approximately 135 percent of surplus, but I mention this only as a figure that has been used in a rate hearing.

The national council has attempted to forestall such erosion of revenues by engaging expert witnesses to testify that the element of risk in workmens compensation is such that the full amount of investment income is needed in addition to the 2.5-percent pro forma profit in order for the industry to attract or hold capital.

While this is conceivable, little has been said to show that the industry is so much riskier now than when interest rates were

lower. Such a case might be made for medical benefits which do go up with inflation, but such argument cannot be made for the two-thirds of the premium dollar that goes for indemnity payments. No escalation of such benefits is provided for once a claim has arisen except through financing outside of the regular rate structure.

This brings us to the question of whether rates should be subject to regulatory discretion under which some official will decide to what extent and how investment income should be taken into account in ratemaking. Political problems aside, it is difficult to see how such a decision could be other than arbitrary. Perhaps by a gradual process of trial and error it might eventually be guessed how far one could go in the downward direction without injuring the insurance market. Yet other factors are constantly at work to influence profitability and investors' decisions. Hence, it seems inevitable that the industry would be ruled by conjecture.

Possibly a definitive study would be made correlating risk and necessary financial profit, and much work has been done in this area. Whether the actions of regulators and investors would ever conform to the conclusions of such a study, once adopted as a guide for ratemaking, one can only surmise.

Alternatively, if competition in the writing of workmens compensation insurance were extended from a scramble for highly profitable business at fixed rates to include price competition, it is reasonable to expect that investment income would receive its proper recognition, no more and no less than any other factor in the cost/price equation of an openly competitive market.

For this to work, of course, full enforcement of laws against price fixing and other forms of combination in restraint of trade must be demanded; that seems obvious.

Another issue sometimes raised deserves mention. This is the assertion that price competition should not be permitted here because of the need to maintain a common data base for loss experience. This argument, if not intended as a red herring, can arise only through a misunderstanding of the function of such statistical agencies as the National Council on Compensation Insurance. Like other such agencies, it would continue in its role of collecting, compiling and disseminating statistics on loss costs. Only the requirement that companies adhere to rates filed by the council on the aggregate experience of all insurers would be relaxed.

Aggregate loss experience would continue to be available to underwriters, the same as now. Rates, however, would be allowed to vary between companies according to their expenses, loss experience and marketing judgment, just as in other industries where prices are determined by costs and market competition. That losses and expenses do vary widely between companies is well established.

Finally, the regulatory role of insurance departments would continue with undiminished vigilance, watching the solvency of insurers and requiring correct performance of their statutory, regulatory, and contractual obligations.

Together with other actuaries on the staff of Woodward & Fondiller, I firmly believe such a program would be an important step in preserving a healthy market for workmens compensation insurance and assuring the continuation of a system of social insurance

unrivaled in its efficiency at delivering timely benefits to injured workmen and their dependents, in the measure provided by law and with payment actuarially assured by the full funding of every claim.

I would be happy to answer any questions I can, Mr. Chairman.

[The information referred to above follows:]

CALCULATION OF THE ACTUARIAL VALUE OF PROFIT AND CONTINGENCY IN THE RATEMAKING FORMULA ACCORDING TO WORREL'S PAYOUT SCHEDULE

Year of payment	Percent paid	Years of discount	Discount factor [1]	Present value
1	16.46	0.3	0.9615	15.83
2	16.58	1.1	.8658	14.35
3	14.20	2.0	.7695	10.93
4	11.65	3.0	.6750	7.86
5	12.10	4.0	.5921	7.16
6	10.85	5.0	.5195	5.64
7	6.00	6.0	.4556	2.73
8	2.90	7.0	.3996	1.16
9	2.90	8.0	.3506	1.02
Over 9	6.36	[2] 12.4	.1970	1.25
Total	100.00	[3] 2.9512	[3] .6793	67.93

[1] At 14 percent.
[2] Payment schedule beyond 9 years spreads the 6.36 percent of Worrel's exhibit according to extrapolated values derived from exhibit AG–XVA of Stergiou's testimony marked January 6, 1982.
[3] Weighted average.
Source: Rhode Island workmens compensation rate hearing, February 1982.

PREMIUM ALLOCATION

Item	Discount period	Discount factor	Cash value	Present value [1]
Losses and loss adjustment	2.9512	0.6793	73.68	50.05
Expense	—.1667	1.0221	23.82	24.35
Profit and contingency			2.50	30.06
Premium	—.3333	1.0446	100.00	104.46
Losses and loss adjustment	2.9512	.6793	86.18	58.54
Expense	—.1667	1.0221	23.82	24.35
Profit and contingency			—10.00	21.57
Premium	—.3333	1.0446	100.00	104.46

[1] As of middate of calendar/accident year.
Source: Rhode Island workmens compensation rate hearing, February 1982.

Mr. LAFALCE. Thank you very much for your excellent testimony. I just have a few questions of you, Mr. Roberts.

First of all, would you agree that private insurers on average return approximately 75 cents in benefits for each dollar of premium paid, that is, with respect to workmens compensation insurance?

Mr. ROBERTS. That is about in the right area, yes.

Mr. LAFALCE. Do you believe that the statements from the Ohio experience are accurate, that they are returning approximately $1.20 for each dollar of premium?

Mr. ROBERTS. I couldn't verify that that figure is currently correct. At the time that we last audited the State fund of Ohio, they were returning more than 100 cents on the dollar, definitely.

Mr. LAFALCE. So that is a substantial increase in benefits than, say, between the Ohio experience and the average State experience?

Mr. ROBERTS. Oh, yes.

Mr. LAFALCE. Am I correct that you are saying the most accurate way to insure a valid reflection of investment income and workers compensation rates is to move to open competitive rating?

Mr. ROBERTS. I do believe that's the truth.

Mr. LAFALCE. Suppose that doesn't come to pass, however at least in a particular State. Then what recommendation would you make to secure an accurate reflection of investment income?

Mr. ROBERTS. I would suggest that the procedures followed recently in North Carolina and in Rhode Island, where we appeared as expert witnesses in North Carolina on behalf of the insurance department, and in Rhode Island on behalf of the attorney general's office, which acts as sort of a consumer advocate, that the procedures there would be appropriate.

What they did was to call for testimony on the value of investment income and converting the ratemaking formula from the format in which the national council presented into one where the total return becomes apparent. That is illustrated by the attachment to my testimony here, wherein we don't just look at the cash value of the premium and the cash value of the losses without taking into account that, if they are both financially valued with interest into account, then the profit is not 2.5 percent but much larger.

Mr. LAFALCE. Thank you very much, Mr. Roberts. With that question I am going to conclude today's hearings.

Let me just state a few things. First of all, I think the hearings have been eyeopening, extremely interesting, extremely informative. I think it is important that Congress be aware of what is taking place in the various States and are aware of the options that are available to lessen the financial burden on the small business sector of our economy. I think this morning's hearing to a certain extent helped in that endeavor. At the very least, this morning's hearing and the prospect of future hearings serves to justify the Washington presence of those organizations who have declined to testify at this morning's hearings, so I hope they are grateful for the hearings for that reason, if no other.

Let me make a final point, that I will be working very closely with GAO, in the next few days especially, in order to come up with the parameters of the extensive investigation which I will call upon them to make regarding the various rate reform options that have been discussed here today, and an examination especially of the different State approaches and experiences.

With that, I thank everyone very much. The subcommittee will adjourn.

[Whereupon, at 11:07 a.m., the subcommittee adjourned, to reconvene subject to call of the Chair.]

APPENDIX

STATE OF MINNESOTA

DEPARTMENT OF COMMERCE

INSURANCE DIVISION

Before the Commissioner of Insurance

In the Matter of the Petition for
Revision of Rates for Workers'
Compensation Insurance of the
Workers' Compensation Insurers
Rating Association of Minnesota/

Issued and Entered
this 21st day of April 1981
by Michael D. Markman
Commissioner of Insurance

ORDER FOR MODIFICATION OF MATTERS
RAISED IN THE PETITION AND FOR ADOPTION OF
A SCHEDULE OF RATES FOR USE IN MINNESOTA

I.
BACKGROUND

On April 30, 1979, the Workers' Compensation Insurers Rating Association of Minnesota ("Association") filed a petition requesting modification of the schedule of rates for workers' compensation insurance. That petition was returned by the Commissioner of Insurance ("Commissioner") with the directive that the Association file a revised petition that would comply with legislation (Minn. Laws 1979, Spec. Sess. ch. 3) that was enacted subsequent to the original filing. The Association filed a revised petition with the

Commissioner on September 13, 1979.

On October 1, 1979, the Commissioner issued a Notice and Order for Hearing on the matters raised in the Association's petition, with this notice published in the manner prescribed by law. The hearing process commenced with a prehearing conference on October 23, 1979. At the prehearing conference and prior to the hearing, the Hearing Examiner ("Examiner") considered among other matters petitions for intervention and ultimately granted intervention status to: Minnesota Department of Commerce Insurance Division Staff ("Staff"); Minnesota Association of Commerce and Industry ("MACI"); Minnesota Independent Truckers Association ("MTA"); and Minnesota Transport Services Association ("MTSA").

Prior to the hearing the Examiner considered and denied a motion by MTSA to dismiss the petition on grounds of non compliance with Minn. Stat., Section 79.171. The Examiner also denied a motion to remove from the petition an amendment that served to adjust the petition for the provisions of Minn. Stat., Section 79.211, subd. 1. During the hearing, this same motion and a request for certification of the motion to the Commissioner were denied by the Examiner.

The hearing commenced on February 21, 1980 and ended on July 23, 1980. In addition to the formal evidentiary hearing, public hearings were held to solicit comment on the Association's petition. During the course of the hearing, the Association made a motion to re-open its case in chief in order to provide supplemental information from a special call to insurers for additional data relating to Minnesota workers' compensation insurance. This motion was certified to the Commissioner and was subsequently granted.

II.
STATUTORY AUTHORITY

The Commissioner's authority in this matter derives from Minn. Stat. Section 79.071. Subdivision 1 of this section states in relevant part that:

> "The commissioner shall adopt a schedule of workers' compensation insurance rates for use in this state for each classification under which business is written. The schedule of rates shall not be excessive, inadequate, or unfairly discriminatory. In adopting a schedule of rates, the commissioner may act on the written petition of the association or any other interested party requesting that a hearing be held for modification of the schedule of rates..."

Subdivisions 2 and 3 of Section 79.071 prescribe the Commissioner's authority with respect to receiving and accepting or rejecting a petition, and for ordering a hearing on the matters set forth in a petition requesting modification of the schedule of rates. Further definition of the Commissioner's authority is provided by subdivision 4 of the same Section:

> "The commissioner may accept, reject, or modify, in whole or in part, matters raised in the petition for modification of the schedule of rates or matters raised in the findings and conclusions of the hearing examiner. The commissioner's determination shall be based upon substantial evidence."

Acting pursuant to Minn. Stat. 79.071, subd. 2 and subd. 3, the Commissioner accepted the petition of the Association. With the hearing having been conducted, the report of the hearing examiner received, and exceptions filed thereto, it is now appropriate for the Commissioner to consider the matters raised in the petition; to accept, reject, or modify these matters as he determines is appropriate; and to adopt a schedule of rates.

III.
ISSUES

The ultimate issue to be determined is whether the rates proposed in the Association's petition are excessive, inadequate, or unfairly discriminatory. The Commissioner shall address those issues arising from the following matters:

1. A request for an increase in overall manual premium rate level of 28.6%.

2. A request for adoption of a general factor in the rate-making formula to exclude wages paid for vacation, holiday, or sick leave from the determination of a workers' compensation insurance premium.

3. A request to amend the pure premiums for individual classifications.

4. A request to amend certain classification assignments and combinations of risks, including reclassifications to impact upon credibility of data and combining certain classification codes.

5. A request to amend the Basic Workers' Compensation Manual to reassign certain existing low credibility classifications.

6. A request to amend certain portions of the Retrospective Rating Plan.

IV.
FINDINGS

This section of the Order shall serve to present findings with respect to matters contested during the hearing which are also critical to the Order. Matters that have not been contested but which are otherwise critical to the Order and are adopted by the Commissioner are specifically addressed in the latter two sections of the Order. Certain other matters were contested by the parties and given due consideration by the Commissioner. However, since their resolution had no bearing on the Order, they are not addressed herein.

Development

Development factors are among the major actuarial elements of the petition. The factors are applied to reported premiums and losses to adjust these figures in accordance with historical movements in estimates of ultimate premiums and losses over time as the experience of a policy year matures. The Association has demonstrated a need for rates to reflect estimates of ultimate policy year losses and premiums. The development factors contained in the petition were reasonably established.

The Staff testimony regarding the impact of changing reserve margins on the accuracy of development factors raises significant questions concerning the actuarial methodology employed by the Association in determining the factors. The Staff failed to substantiate and quantify actual changes in reserve margins, however, and its failure to do so precludes any alteration of the Association's petition in this respect. The Staff appropriately suggests the need for study of the development calculation, a position that is discussed at length under the subheading "Related Matters" of this section.

MACI witness Chang argued that the development factors in the petition were overstated, basing this contention upon an analysis of data submitted by insurers in response to the special call conducted during the hearing at the request of the Association. Chang re-calculated development factors with the more recent data of the special call and concluded

that development was overstated in the petition by about 6-7%. The Association contended that Chang's analysis was based upon inadequately tested data. The Association's argument creates sufficient uncertainty so as to compel the Commissioner to reject the specific value put forth by MACI, while acknowledging the intuitive appeal of Chang's refining approach. It is carefully noted that the Commissioner's rejection of the Chang re-calculation is consistent with the treatment of trend in this Order (see subheading "Trend" of this section).

On-Level Factors

The need to bring reported policy year experience values of premiums and losses to current levels of rates and benefits is uncontested. Factors designed to accomplish this refinement of reported data are appropriately applied prior to calculating the experience indication for premium level needs. MACI contends that the Association methodology does not appropriately reflect expense constant removal and that the Association is in error in the on-level calculation. MACI's contention is not persuasive. The Association's on-level factors are reasonably established.

Trend

Despite considerable interest in and discussion of the conceptual and technical aspects of the trend factor proposed in the petition, the Association has failed to demonstrate the statistical, theoretical, and judgmental soundness of its trend calculation. The Association's testimony and exhibits offer several different attempts at supporting a trend methodology but the overriding conclusion must be that too much statistics is chasing too few data. The Staff is correct in arguing that a least squares time series with six data points used to project three to four periods into the future is inappropriately applied. In short, otherwise desirable statistical methods are not immunized from contextual misapplication.

A large number of data points could have been utilized by the Association. Additional data should more convincingly support statements as to different rates of growth in medical losses and premium over time. Further, additional data points and, possibly, other independent variables to estimate premium and losses, together with appropriate estimating techniques, should substantially increase the statistical accuracy of prediction. Even at its finest, trending is an imperfect art. Yet the use of just six data points, when many are available, in order to project a value nearly four time periods out renders any quantitative statements regarding such analysis meaningless. Furthermore, the decision to use only six points in such a case either

raises serious questions with respect to the depth of methodological understanding on the part of the Association, or indicates a lack of serious intent in actually addressing the issues involved by the Association. Whichever is true, the net result is that the trend factor must be rejected.

The indicated trend in medical loss ratio as contained in the petition is modified by a credibility indication derived from a Spearman D statistic. Clearly, this statistic addresses only the aspect of monotonicity of movement, serving at most to confirm the existence of trend and remaining silent as to magnitude. There seems to be no reason for utilizing a Spearman D indication to modify trend rather than one of a number of more sophisticated measures of the quality of a least squares line which are theoretically well-grounded.

No party to the proceeding suggested that trend in concept was unreasonable, though Staff witness Lowe questioned the interrelationship between development and trend during periods of reserve margin changes. Despite the serious weaknesses of the trend proposal in the petition, the Commissioner believes that a factor for trend may be legitimate and can be reasonably derived using statistical or more simple and direct mathematical tools. In the future the Association must present enough data and a reasoned discussion of alternatives and the rationale supporting judgments, together with appropriate use of any chosen trend methodology, so as to raise the level of argument on this issue to the point where an informed decision may be made.

As noted earlier in this section, the Commissioner's rejection of MACI witness Chang's contention regarding the overstatement of development is accorded treatment similar to that of trend. Both MACI's position on development and the Association's position regarding trend hold some logical appeal, but neither is sufficiently supported for adoption at this time.Had both the Association trend and the MACI development correction been adopted, the net result for rates is approximately the same since each would serve to cancel the other.

Effect of Legislation

The Association's petition includes a set of factors which are derived so as to recognize the impact of recent legislation upon manual premium level need. Factors of 1.020, 1.026, and .989 give reasonable recognition to the effects due to automatic adjustments in maximum weekly benefits in 1978 and 1979, and the 1979 benefit changes of S.F. No. 1, respectively. The fourth factor of .908, which is intended to account for the effect of the limitation on liability occasioned by the Reinsurance Association created in S.F. No. 1 (1979), has been contested on two counts by

Staff witness Lowe.

The Staff contends that the Association overestimated the impact of the limitation on loss exposure due to the Reinsurance Association and suggests that a discounted reinsurance charge should be utilized in evaluating the effect of the Reinsurance Association. Because of the use of investment income in this Order to establish an alternative allowable loss ratio, neither the Association proposal nor the Staff proposal is acceptable. When an allowable loss ratio is established using investment income, the methodologies utilized by both the Association and the Staff in determining the impact upon rates of the Reinsurance Association's limitation on liabilities are inappropriate.

The difference between the Association's figure and the Staff's is largely the result of the Staff's use of a 3.5% discount. Since a 7% tax free rate of interest is assumed in this Order, that value would have to be used if the Staff's methodology were to be adopted. Obviously, this further reduces the impact on the rate of the limitation on liability. The phenomenon which is occurring is that investment income is reducing the rate indication by a large amount without the limitation of liability. However, since the limitation of liability affects only the longest tail claims from which a disproportionate percentage of investment income is drawn, the use of investment income in determining rates will substantially reduce the significance of the limitation of liability.

An estimate of the effect of limitation of liability that is consistent with the approach adopted in this Order can be constructed utilizing available information. First, the Staff analysis showed that a 3.5% discount would reduce the impact from 9.2% to 4.7%. Further, the Reinsurance Association premium for $180,000 losses excess of $320,000 is 2% with a 3.5% discount and expenses. Therefore, a reasonable estimate of the impact of the limitation of liability for losses above $500,000 is 1%. Consequently, a factor of .99 will be utilized to account for the Reinsurance Association's limitation of liability rather than the .908 factor contained in the petition. The final overall determination of the effect of Legislation is then appropriately recognized by a factor of 1.025.

Finally, the Association's accedance to the Staff's factor for the impact of the limitation on liability deserves comment. First, one must recognize that the major component in the Staff's analysis leading to its choice of the factor was a discounting procedure, also used by MACI witness Chang, which was flatly rejected by the Association. Second, the use of such a procedure, although certainly appropriate, runs counter to the entire Association case. Third, in the entire record the only point raised by an intevenor to which

the Association acceded was the single one which served to increase the rate request. One must conclude that the Association's accedence was either completely gratuitous or the result of the Association's misunderstanding of its own petition. Whichever is true, neither is appreciated.

Expense Limitation

The Association includes a factor in the petition that serves to reduce rates by reflecting a self-imposed cap on insurers expenses that do not vary in a one to one relationship with loss experience. The Association's factor follows a decision to contain the increase in certain expenses to 6.2% over and above any inflationary growth in the premium base.

MACI witness Chang and Staff witness Lowe contend that if the expenses in question do not necessarily and directly follow loss movement, then it is reasonable to suppose that the growth of these expenses should be held to the increase in inflation as reflected in wage base and no more. Chang and Lowe, however, do not offer sufficient evidence to support the position that a portion of insurer expenses should increase only to the extent of inflation in the rate base. No party to this proceeding has conducted the necessary expense analysis to substantiate the amount by which expenses should be allowed to grow, but the Association proposal is considered to be reasonable at this time since it has the result of imposing some cap on insurer expenses where there is otherwise none. Further work on this issue would prove useful in considering future rate petitions.

Permissible Loss Ratio, Combined Ratio, Underwriting Profit Profit, and Profitability

Rates are ideally designed to generate premium in an amount sufficient to cover losses and expenses while providing a reasonable return on the insurer's investment. The Association's request for an increase in rates is mathematically based upon a comparison of (1) the estimated percentage of premium dollar currently used to pay ultimate losses as reflected in policy year experience and (2) the percentage of premium which the Association asserts should be allowed for losses (permissible loss ratio) in order to also allow insurers to cover expenses and earn a reasonable profit. The first percentage, the policy year experience loss ratio of 85.1%, is divided by the second, the permissible loss ratio of 62.2%, to yield an indication of rate level change.

The Association's request for a modification in rates is, then, premised upon critical assumptions that 35.3% of the premium dollar must be available to cover expenses and 2.5% is an appropriate underwriting profit. This leaves 62.2% as the permissible ratio. The rates proposed by the Association are thus based upon a combined ratio of 97.5%. This is the assumption as to the percentage of premium dollars that can be used to cover losses and expenses and will result in reasonable profitability for insurers.

Since the petition proposes a 2.5% profit and contingencies loading per premium dollar, the combined ratio that is arithmetically implied and that is assumed in the petition is 97.5%. The major assumption made by the Association in deriving the permissible loss ratio in the petition is that a 97.5% combined ratio is appropriate for workers' compensation insurers in that the rates calculated by using this assumption are neither inadequate nor excessive.

The Association has fallen far short of establishing the reasonableness of the assumption of a 97.5% combined ratio or, alternatively, a 2.5% underwriting profit. It is quite apparent upon reviewing the petition that the Association considered and addressed the reasonableness and implications of a 97.5% combined ratio only as an afterthought or supplement to the petition. The petition itself presents inadequate and inappropriate methodology upon which to base an analysis of the issue of rate excessiveness or inadequacy, for it does not address the reality that a premium dollar does not remain sequestered but is invested and grows with time.

The Association asserts that admittedly significant income from invested reserves is considered "implicitly" within the petition. The Association states that the rating formula is designed to implicitly recognize investment income but provides no evidence to substantiate the contention of designer foresight. No evidence exists in the record, for example, to support the notion that any element of the formula is designed to recognize the fact that loss payout patterns, interest rates, and, therefore, opportunities for investment returns change.

The Association's position that a 2.5% underwriting profit is somehow neither excessive nor inadequate requires more than an acceptance of the proposition that the 2.5% figure is right for Minnesota in 1981. The Association relies heavily on the fact that the 2.5% underwriting profit has been profit used in most other jurisdictions for several decades, implying that one must accept the proposition that this profit loading has also been right for every other jurisdiction for the last many years in spite of a changing environment of laws and the economy. This cannot be accepted without in-depth study. The Association, in alluding to this commonality among jurisdictions to justify the profit

factor in the petition, only succeeds in casting further doubt on the properiety of this factor for Minnesota. While the Association did attempt some further analysis, the evidence simply does not reasonably support the permissible ratio in the petition or the 97.5% combined ratio implicit to the petition and from which the permissible ratio is derived.

The fundamental issue to be addressed in determining the reasonableness of the Association's petition is the profitability that can be expected by insurers operating with the proposed rates. Traditionally, the only source of income considered in ratemaking has been underwriting income, despite the fact that investment income is a very important source of income to insurers in the workers' compensation line of business. The issue of profitability and rates requires answers to two questions:

(1) What is a fair return to insurers on the surplus or investment needed for the risk they bear in doing workers' compensation business in Minnesota?

(2) What is the combined ratio at which insurers can expect to attain a fair return?

Both of these questions were addressed at least indirectly during the course of the hearing and must be addressed in an appropriate examination of rates.

(i) Fair Return

The testimony presented by witnesses for the Association and the Staff regarding fair return is not based upon analysis which is optimal for deriving and determining a fair return benchmark. However, the record can be evaluated to arrive at an estimation of a value for fair return on surplus. The Association asserts that insurers should receive a return in the range of 18-20%. The Staff asserts that a return in the range of 11-25% is appropriate. A return benchmark value for use in assessing the excessiveness or inadequacy of the rate level proposed in the petition is necessary.

An 18% fair return value lies at the midpoint of the Staff position and at the lower end of the much more compact Association range. This return is appropriate for evaluating the expected profitability to insurers at rates derived from a given combined ratio. The choice of an 18% return as benchmark is also appropriately conservative in that it is justified due to flaws in the approaches of the Staff and the Association, including a serious failure to reflect the significance of the Reinsurance Association in

reducing risk. Contentions with respect to fair return were flawed by lack of thoroughness on the part of Staff and statistical-methodological error by the Association in its presentation.

A comprehensive risk-return analysis, making inter and intra-industry comparisons of properly calculated and appropriate profitability measures and accounting for risk-affecting factors such as the line of insurance and the Reinsurance Association, is imperative in bringing all relevant information to bear on the question of the return that should be earned by Minnesota workers' compensation insurers. This analysis will greatly contribute to the consideration of future rate petitions.

(ii) Appropriate Combined Ratio

Three witnesses addressed the question of "what return may be expected by insurers writing workers' compensation business in Minnesota at the rates proposed within the petition?" Two Association witnesses concluded that the rates in the petition would not result in excessive returns to insurers and are therefore not excessive. While agreeing on the non-excessiveness of the proposed rate levels, Association witnesses Plotkin and McAlenney arrived at their conclusions in very different manners.

The testimony of Association witness Plotkin is not persuasive for a number of reasons. These include (a) the use of a return on total capital approach, (b) the use of "expected" returns based upon past underwriting results, and (c) the use of historic, calendar year data.

Witness Plotkin's arguments as to the propriety of a total capital basis for comparing the profitability of the insurance industry and other industries are simply not compelling. In fact, it is wrongheaded to suggest that the role of loss reserves in the insurance industry and long term debt in other industries is analogous. The industrial sector issues both equity and long term debt and must generate a return to pay the interest on debt and to provide an adequate return to equity investors. In significant contrast, the source of investable funds within the insurance industry includes equity investment and premium dollars from policyholders. The insurer is obliged to provide a return only on the capital supplied by the equity investor. Consequently, the rate setting context the appropriate focus is the rate of return on equity capital (surplus) and not on any other basis.

Total capital, as defined by Plotkin, is not a fair or appropriate basis for comparing profitability of insurers with other industries. While there may be some logic to Plotkin's preference for the total capital approach in analyzing returns within the same industry or within groups of industries that operate in a somewhat similar fashion, returns on net worth or surplus are those that are appropriate for comparision in the insurance ratemaking setting. To assume otherwise is to ignore the fact that the purchasers of debt instruments in the manufacturing sector are investors, not customers as in the insurance industry. This is a fundamental difference which must be recognized.

Plotkin's analysis must be rejected for a second reason as well. He adopts the position that the rate level developed within the petition will not be sufficient to result in the profit and contingency loading that is put forth there, in effect dismissing the actuarial work and opinion of the Association. The essence of Plotkin's reasoning seems to be that actuaries and regulators haven't been right in the past, so we should expect them to continue to be consistently in error with respect to developing or adopting rates.The witness's study of expected returns for insurers is premised on the assumption that past combined ratio experience of workers' compensation insurers will be repeated. This is a cynical supposition that is is contrary both to the spirit of the hearing process and the rate level development in the petition.

The rate of return which is implicit in the Association's proposal is the appropriate level of profitability to be tested, and that rate of return stems from the 97.5% combined ratio of the petition. It is simply inappropriate for the Association to maintain, on the one hand, that its actuarial analysis is correct while also assuming that its choice of a 97.5% combined ratio will not be realized if the petition were to be granted.

The judgment of inadequacy or excessiveness of the rate level proposed this year should not be based upon past achievements but is properly made with respect to the rate level proposed within the petition and the rate of return implicit to the Association's petition. The Commissioner further notes that acceptance of witness Plotkin's argument is contrary to the Association's often repeated assertion that the rate formula used by the Association is true and tested. Witness Plotkin's point that the actual results will differ from the pro forma is well-taken, but it must and should be fully incorporated into the petition by

the Association if it is to be of any use (see discussion under subheading "Related Matters" of this section).

Finally, witness Plotkin contends that the Association's rate proposal implies a return on equity of over 22%. This figure is interesting in that it is considerably in excess of that estimated by Association witness McAlenney. Even so, it is at best a gross indication of return on equity since it is put forth without appropriate consideration of current interest rates and investment opportunities because it is derived from historic, calendar year data. In addition, the witness has not conducted a risk-return analysis to bridge the gap between Association testimony that indicates an average return on net worth for FTC-SEC companies of about 15% and the alleged return on equity for insurers of 22%, leaving unanswered the question of whether the disparity is reasonable.

Association witness McAlenney and Staff witness Kramer have provided testimony concerning alternate financial models which, though differing in several details, are both intended to address the issue of the return on surplus for Minnesota workers' compensation insurers. Each of the models in question is driven by a set of assumptions regarding combined ratio, claims payment patterns, rates of return on invested assets, and financial leverage. Given specific values for these assumptions, the models can be utilized to indicate the return on surplus that is expected to be attained by insurers. Each of the assumptions can be addressed in turn.

Clearly, the appropriate combined ratio to test the inadequacy or excessiveness of the proposed rate level is that combined ratio put forth in the petition, 97.5%. This is the combined ratio that incorporates the losses and expenses so laboriously developed in the petition, and that will be realized if all of the actuarial estimations contained in the petition are approximated.

The claims payment patterns used by the Association in their models differ substantially from the patterns used and developed by the Staff witnesses. Despite considerable testimony regarding the long-tailed nature of workers' compensation insurance, the two claims payment patterns assumed by the Association indicate that all losses are paid by the 10th year following the initial insurance transaction. Staff witness Lowe's claims payment patterns are based on Minnesota data and appear to be the most accurate and carefully developed pattern, though it is truncated

after the tenth year following the insurance transaction.

The claims payment pattern utilized by Staff witness Kramer in his financial model closely parallels that pattern developed by Lowe, who was the only actuary to testify to a payout pattern, and there is no distortion from use of the Kramer pattern. In addition, witness Lowe testified that the pay out of claims subsequent to the 10th year also closely parallels the Kramer pattern. The appropriate claims payment pattern for use in this proceeding is the 14 year pattern reflected in the Kramer financial model and supported by the actuarial analysis of Minnesota data by Staff witness Lowe. The Kramer pattern is most reasonable in that it is the most completely developed in terms of approximation to ultimate claims payment. It is also significant to note that the loss development factors used by the Association from fourth report to ultimate, ranging from 16.6% to 21.1% make the much shorter payout patterns assumed by the Association a near logical impossibility.

The record contains a good deal of information concerning investment earnings and interest rates and could reasonably support a range of assumptions with respect to the value of interest rates. Despite the volatility of the economy, it is clear that Association witness McAlenney's assumption of a 4.82% after tax investment return throughout most years of his models is inappropriately below returns that can be reasonably expected from 1981 premium dollars. Kramer's models utilized a variety of returns on invested assets, and while they clearly demonstrate the sensitivity of workers' compensation profitability to the return on invested assets they do not suggest the choice of any particular yield. Some choice of an estimated yield based on current and foreseeable yields is appropriate.

An assumption of a 7% after tax investment return is clearly reasonable and is chosen as the appropriate yield figure for use in this Order. It recognizes that historical returns are not applicable to present considerations and it is appropriately conservative with respect to the returns that could possibly be realized by more risk-taking investment strategies. That is, it has been for nearly two years, is currently, and will be for the foreseeable future very possible to invest in tax free instruments that yield at least 7% without incurring substantial risk to the principle. An assumption of a much higher yield may not be justified given the volatility of the economy and the implications such an assumption would hold for insurer risk. A higher yield assumption is not

considered prudent by the Commissioner, though a case could be made for assuming a higher yield.

The issues of the amount of premiums which are written for a given amount of surplus and the appropriate financial leverage are intertwined and may be considered simultaneously. The Association asserts that leverage is appropriately recognized through a loss reserves to surplus ratio based upon the argument that surplus or equity capital is needed to support loss reserves. This argument is compelling and a leverage measure based upon the ratio of loss related reserves to surplus is more appropriate than the Staff contention that a premium to surplus ratio is an appropriate leverage benchmark. In addition, the selection of a reserves (both loss and loss adjustment) to surplus leverage requirement insures that financial projection models will maintain appropriate surplus throughout the claims payment cycle.

The Association, however, has been overly conservative in establishing an assumption of a two to one loss reserves to surplus leverage ratio. The 2:1 ratio set forth by McAlenney stems from data that represents all insurance lines industrywide and is not appropriate for the workers' compensation line of business. Substantial and uncontested testimony has been introduced to substantiate that workers' compensation insurance is very different fom other lines of insurance due to characteristics of risk, length of claims payment tail and other factors. Clearly, to rely on a leverage measure based on overall insurance data is to ignore the important distinctions of workers' compensation insurance.

The Association value of reserves to surplus is dominated by too many insurers who write relatively little long-tail lines of business, but who write high volumes of potentially volatile short-tail, and quickly developing lines which require substantial surplus, but which do not generate massive loss reserves. State Farm and Allstate are but two examples of companies whose inclusion in the Association measure results in considerable skewing with respect to the leverage value. Workers' compensation insurance is necessarily a more highly leveraged business from a reserves to surplus standpoint and a more appropriate reserves to surplus ratio is 3:1.

The data entered into the record as part of the Association's special call confirms the reasoning advanced above and serves to support the Commissioner's judgment. Data regarding capital and

surplus attributable to Minnesota workers' compensation business, and insurers' Minnesota incurred losses are available for the same 1975-1976 time period used in the filing. The use of data from this time period is also appropriate since reported losses have had time to mature.

The overall 1975-76 ratio for incurred losses to surplus for all insurers responding to the special call is about 2.75:1. This figure, it should be noted, does not include any loss adjustment expenses which, according to the record, vary closely with losses and also are available for investment similar to loss reserves. One can look at the ratio of losses to surplus of the two leading writers of Minnesota workers' compensation to get an idea of the value of the ratio for companies whose overall business is weighted by workers' compensation. The weighted losses to surplus ratios of these companies for 1975-76 exceeds 3.5:1, again without adding loss adjustment expense.

Finally, the ratio over the 1975-76 period calculated from State Farm data is well under 2:1, confirming to the inappropriateness of the measure utilized by the Association. The choice of a 3:1 loss reserves to surplus leverage assumption reasonably recognizes the distinctions of the workers' compensation line of business and the fact that a conservative assumption is appropriate at this time pending further data. To assume a lower ratio, as the Association did, results in artificially lowering the rate on return on surplus by imposing an unrealistic constraint on leverage.

The financial model put forth by Staff witness Kramer is for most purposes more complete and comprehensive, and more fully captures and approximates the insurance transaction and traditional insurance accounting than the Association's model. While the structure and relationships of the model put forth by Staff witness Kramer may be more convenient and appropriate than those of the Association's model, there is no need to choose between models. Neither model should be used without a reconciliation of certain differences between the two.

Clearly, each model must ultimately yield approximately the same result when run with consistent assumptions. This will be the case when Kramer's model is adjusted to return surplus in excess of one-third of reserves at the end of each year, and the constraint with respect to investable percentage of reserves is removed from the McAlenney model. This latter condition is inappropriately imposed due to the concern is rate setting with marginal results.

Finally, one must decide upon the most appropriate discounting treatment in assessing insurer profitability. Kramer discounts the investment income stream to present value using a 6% discount rate, adds an assumed 6% return on raw capital, and divides this operating income by initial required surplus to get a percentage return on surplus. McAlenney uses an internal rate of return calculation to solve for the interest rate that is necessary to discount cash flow to the initial required surplus.

The record contains no compelling reason to choose either method over the other one. However, internal rate of return is used in this decision because it does not require a particular rate of interest for the purpose of making the discount. While Kramer's choice of the same discount rate as his assumed return on raw capital is defendable, he generates income with an investment and reinvestment rate which is in excess of the discount rate, thus showing additional returns for the model. It seems difficult to justify a discount rate which is less than the reinvestment rate. Internal rate of return, on the other hand, does not require the choice of a discount rate. Because this choice does not need to be made, internal rate of return was used in the final test of whether or not the 97.5% combined ratio yields excessive rates as well as in the determination of what combined ratio yields the appropriate (18%) expected return on surplus.

While differences can and do exist in the calculation of discounted cash flow by internal rate of return and net present value methods, no significant difference exists for the purposes of this hearing. To amplify, when the net present value of a capital project that is discounted at a value equal to the fair rate of return equals zero, the internal rate of return is equal to the value used in discounting (the fair return). Hence, either approach will yield consistent results in the present context if appropriately applied.

An appropriate hybrid model which provides the implications of a set of assumptions and indicates return on surplus or expected profitability can be easily applied employing assumptions for payout of losses, return on assets, and financial leverage as set forth above.

Attachment I displays cash flow and profitability implications resulting from the following set of

Assumptions:

(a) A claims payment pattern as was utilized by Staff;

(b) An investment yield of 7% after taxes;

(c) Leverage equal to a 3:1 reserves to surplus ratio;

(d) An initial surplus requirement consistent with the leverage requirement;

(e) Loss and expense amounts per dollar of premium as set forth in the petition; and,

(f) Pay-out of surplus as it is no longer needed to support reserves.

This model indicates that workers' compensation insurers in Minnesota can reasonably expect a return on surplus in excess of 30% if operating with a 97.5% combined ratio. Rates that are derived using a 97.5% combined ratio therefore result in returns that are clearly and substantially above the 18% fair rate of return.

The Association proposes an expense loading or allowance of 35.3% of each manual premium dollar (this is in addition to the 2.5% profit and contingencies factor). This expense allowance is reasonably supported by the record. Given the expense allowance and the other necessary, reasonable, and appropriate assumptions, an iterative approach can be taken to discovering the combined ratio at which Minnesota workers' compensation insurers can be expected to attain a fair return on surplus.

Using the set of reasonable assumptions (a) through (f) as specified above, it is found that with rates based upon a combined ratio of 110% insurers can expect to realize a fair return on surplus of slightly more than 18% for the effective period. That is, making reasonable assumptions together with a combined ratio of 110%, a model which is fully consistent with the structures of both the Staff and the Association models indicates that the expected return on the surplus that is needed to write an amount of workers' compensation insurance business is the established fair return of 18%. A combined ratio of 110% yields a permissible loss ratio of 74.4%. The 74.4% permissible ratio, in turn, arithematically results in a policy year experience indication of 1.139 or 13.9%.

It must be noted that witness Chang's methodology of discounting loss reserves is also conceptually consistent with the methods of the Staff and the Association, but is not discussed at length partly because the record was incomplete in terms of instruction for choosing the appropriate discount factor. The MACI position in the hearing supported a combined ratio of approximately 108%, which is a more conservative result than was finally used. This indicates that the use of witness Chang's methodology with some discount factor greater than the 5% utilized in her models could be appropriate, although the different payout patterns she assumed makes any final comparison somewhat difficult.

Vacation, Holiday, and Sick Leave Adjustment

The Associaton has proposed to adjust rates due to the affect on wage base of compliance with the provision of Minn. Stat. Section 79.211 subd. 1. This legislation provides for the exclusion of vacation, holiday and sick leave from the payroll base. According to the Association, the legislation can be estimated to result in an average decrease of 10% in payroll base from which workers' compensation insurance premium is derived. The decrease in payroll base necessitates an increase in manual premium rates of 11.1%.

This adjustment is reasonable in that the total amount of premium needed to provide worker's compensation insurance is not affected by the decrease in payroll. Therefore, all other things being equal, when the payroll base is decreased a higher rate per dollar of payroll is needed by insurers. Further, since the Association proposal presents the option to employers of electing either a standard decrease in payroll base of 10% or the actual decrease in payroll base due to vacation, holiday or sick leave reflected by employer records, the factor adjusting the rate level cannot result in a windfall to insurers.

Related Matters

The issues raised in the petition and the hearing record, especially those relating primarily to the interaction of the financial and actuarial considerations in the petition, have never before been considered in Minnesota and are, moreover, on the frontier of insurance regulation across the country. The primary difficulty that arises in attempting to evaluate these issues is that the lack of relevant and reliable information.

It is now appropriate to discuss the needs of the Association and of the Commissioner and to establish requirements that must be met by petitions that may be forthcoming. The

discussion that follows addresses issues one by one but it would be a serious error to think that these considerations are not so intertwined as to be conceptually inseparable. Rate setting and ratemaking both demand a more comprehensive and holistic approach to the problem of establishing adequate but not excessive or unfairly discriminatory rates than has been used in the past.

(i) Development Considerations.

At the core of the actuarial testimony offered by the Staff is a considerable misgiving with the exclusive use of incurred loss data in the petition. The staff's apprehension appears to be significant because of the subjectivity inherent to incurred loss data. More specifically, incurred loss data is in large part comprised of estimates both of losses not yet paid and losses not yet reported to insurers. These estimates are made by individuals who, while professionals, are neither omniscient nor unaffected by changes in their business environment and the results of previous business decisions. The subjectivity of establishing loss reserves includes not only an estimate of such things as the severity of an injury and a prognosis of the injured worker's future recovery rate but may also reflect, for example, the insurer's estimation of how law changes will impact on ultimate losses or benefit utilization.

Paid losses and the number of reported claims, in contrast to incurred losses, are objective and known amounts. Judgment and intuition have no effect on paid loss figures or on reported claims. The question arises: Why accept development as based upon subjective estimates of incurred losses without considering, examining, and attempting to employ to some degree the objective information about paid losses and reported claims?

The Staff has argued that insurers, in response to or in anticipation of changes or discontinuities in loss experience, make logical business decisions to marginally adjust loss reserves. The Staff has shown that such decisions and subsequent reserve adjustments -- to the extent that they are non-repetitive from year to year -- would artifically impact upon traditionally calculated development factors, either increasing the factors when reserves are strengthened or reducing factors when reserves are allowed to run off or are reduced. That is, the historic method of calculating development which the phenomena noted by Association witness Berquist is an appropriate method to refine estimates of loss in a static system, but it may be

misleading and inappropriate if development is due to the inexperience of insurers with a new situation since this latter type of development should be non-repetitive.

Data from policy years 1975 and 1976 come from the period during which significant changes in workers' compensation were enacted by the Minnesota Legislature. The idea that insurers, necessarily inexperienced in doing business under the new law, can nevertheless maintain consistent reserving practices is on its face very difficult to accept. More importantly, a reliance on historic development methods, the accuracy of which depends upon consistency over time, without exploring the implications of existing data regarding numbers of claims, losses, and paid and outstanding breakdowns, completely discounts and ignores any possibility that insurers undergo organizational learning.

Inexperience with a new law may result in a need for insurers to adjust reserves upward bya significant amount after a year or so of operating under the law. The result of this decision is that traditional report to report development applied to incurred losses could indicate very substantial development between reports of loss for one or two policy years. The cause of this marginal development would not be one of those enumerated by Association witness Berquist but could be simple inexperience in operating under a law. A one-time reserve adjustment would reflect learning, would not be expected to be repeated,and should not unduly influence development factors.

The sort of reserve changes that are the result of organizational behavior and learning, and which may lead to artificial inflation or deflation in development factors,are precisely what one might anticipate during the period of the mid to late 1970's. The factors as derived by the Association, therefore,may be responding to movements in reserves even though the movements may serve only to bring reserves to appropriate levels, and even though future reserves may be set at the correct levels because of learning about the phenomena which initially necessitated the reserve adjustments. A marginal change or an adjustment to reserves may reflect only a one-time business decision rather than an actual change in historical loss development. An examination and reconciliation of movements in incurred and paid losses could begin to shed light on the existence and extent of the phenomena of reserve margin changes and their relationship to development factors.

As already stated, Minnesota has experienced major changes in law concerning benefit structure over the

past several years. It is plausible that significant law changes enacted during 1975, 1976, and again in 1979 have resulted in one-time, organizational learning adjustments as hypothesized by the Staff. In addition, the work begun by Staff witness Lowe indicates the presence of changes in paid and outstanding loss relationships and of development beyond ninth report.

It is clearly in the interests of all parties to investigate and utilize alternative sources and elements of data in establishing development factors, especially in view of the current ratemaking environment. Further analysis is necessary and the insurance companies should be eager to the see results of the analysis, since to rely without question on traditional ratemaking methodology is to deny the possibility that insurers learn and respond to their environment and self-interest.

An ongoing evolution of the law presents very serious problems to the insurance industry in the establishment of appropriate reserves. While the hearing record does not contain specific information relating to the stability or lack of stability in reserve margins, any period of substantial uncertainty is likely to lead to fluctuating reserve margins. It is therefore reasonable to require that the next petition must contain substantial analysis of the stability of reserve margins and that the Association must present witnesses at the hearing to address this issue. Failure to include such substantial analysis will result in a rejection of the petition.

(ii) Considerations Concerning Ultimate Losses

Another issue which must be appropriately developed in the next petition relates to the establishment of ultimate incurred losses. The current petition presents a final incurred loss number for both policy years in question. This number is merely an estimate and should be treated as such. The estimate is a random variable around which some probability distribution exists. The estimated parameters of this distribution would be immensely helpful to anyone attempting to make a decision on the petition, especially when considering the petition's financial implications. An 18% return on investment will be earned by an insurer experiencing a 110% combined ratio. However, there is no indication in the petition as to the likelihood that the actual industrywide losses will either fall short of or exceed the estimate in the petition. Hence it is impossible to determine or even to speculate on how actual earnings of insurers may differ from the expected 110%. Perhaps the

philosophy behind the traditional 2.5% profit and contingency loading made analysis of the range within which actual losses may flow superflous. However, the methodology for rate setting used in this decision makes the inclusion of such analysis imperative. The testimony of Association witness Plotkin relating to the differences between pro forma and actual results illustrates the need for the analysis outlined above.

(iii) The analysis in the petition with respect to the appropriate incorporation of the Workers' Compensation Reinsurance Association into the schedule of rates was inadequate at best. This is, no doubt, due to the unknown nature of the WCRA at the time of filing by the Association. Since the operation of the WCRA is now well known, however, the following must be included in any future petition.

(a) An analysis of the impact of the WCRA on the risk of underwriting workers' compensation in Minnesota.

(b) Sufficient analysis of loss reserves by size of loss to allow one to determine separately a rate schedule for only those losses below the lower retention limit, losses below the higher retention limit, and losses below the limit beyond which the WCRA may not charge a prefunded premium.

Failure to include such data will result in rejection of the petition.

(iv) Classification Credibility

Another actuarial issue which merits further attention is the assignment of credibility to various classifications. Apparently, the Minnesota system of establishing credibility includes no consideration whatsoever to the experience of classifications on a countrywide basis. The Association should study the appropriateness of increasing the credibility of low credibility classes through use of countrywide or other non-Minnesota data from the specific low credibility class rather than utilizing the current method. Such a study must be undertaken and completed for submission as part of the next forthcoming petition. If this is not possible, a plan which includes a reasonable time frame for the completion of such a study should be submitted to the Commissioner for approval prior to the submission of another petition.

(v) Presentation of Witnesses

It is reasonable to expect and require that a member of the Association's actuarial committee must appear at the hearing in support of all actuarial aspects of the Association's petition. The use of Mr. Berquist as a witness or any other expert is not prohibited; but some expert who actually participated in the decision making process must present testimony and be subject to cross examination. It is not useful or productive if a situation exists wherein the decision makers are not responsible for, or available to explain, decisions.

(vi) Financial Considerations

The current petition was filed with a request for a 2.5% profit and contingency factor with no consideration given to investment income other than an after-the-fact analysis that concluded that the expected return would not be excessive. Such a methodology is no longer acceptable and will not again be tolerated by the Commissioner.

In order to allow the Commissioner to make an informed decision as to whether or nor a future petition meets the requirements of Minn. Stat. Section 79.071, any forthcoming petition must contain the following specific elements:

A. A request for a specific return on the invested surplus of the insurers.

B. An assumed pattern for the payment of losses.

C. Assumptions regarding the earnings of invested assets.

D. Assumptions regarding the degree of financial leverage undertaken.

E. An appropriate model to transform the data utilized in the petition to proforma financial results which may be used to evaluate the need for a change in the schedule of rates.

Without each of these elements explicitly included, the petition will be rejected.

(vii) Data

Any forthcoming petition must include data for all of

the elements specifically required in Minn. Stat. Section 79.171 for Minnesota insureds only. Where estimated or allocations are required, they must be specifically spelled out and justified. Failure to provide a complete set of data on these elements will result in rejection of the policy.

(viii) Finally, the length of time required for completion of this hearing must be considered. While several factors were beyond the control of all parties to this hearing, the time from filing of the petition to the issuance of the Order was unreasonably long. This is not only unfair to the Association members, but it also creates added complexity in the hearing in attempting to create an appropriate schedule of rates over such long periods of time.

In order to simplify and shorten the hearing process to a reasonable time, the Association should, in the future, include in its petition all of its prefiled testimony in support of the petition. This should allow the Commissioner to make a more timely determination of the adequacy of the petition as well as substantially shorten the time necessary for completion of all pre-hearing activities.

V.
CONCLUSIONS

Based upon the Findings in this matter, the Commissioner CONCLUDES that:

1. All requirements of law have been met in the consideration of the petition.

2. The Association has established the reasonableness of the on-level factors set forth in the petition and the following factors should be adopted for the purpose of adjusting reported policy year experience values of standard earned premium, incurred indemnity losses, and incurred medical losses to reflect current levels of rates and benefits:

   (i) 1.390, 1.539, and 1.000, respectively, for policy year 1975 experience, and

   (ii) 1.330, 1.418, and 1.000, respectively, for policy year 1976 experience.

3. The Association has established the reasonableness of the development factors set forth in the petition and the

following factors should be adopted and applied to reported policy year values of standard earned premium, incurred indemnity losses, and incurred medical losses to reflect estimates of ultimate values of these data:

(i) 1.010, 1.433, and 1.312, respectively, for policy year 1975 experience, and

(ii) 1.042, 1.715, and 1.376, respectively, for policy year 1976 experience.

4. The following uncontested factors should be adopted as set forth in the petition as the basis for distributing a modification in rate level among manufacturing, contracting, and all-other groups:

(i) Policy year differentials of .983, 1.018 and 1.003, respectively, and

(ii) Earned to manual premium differentials of 1.008, 1.010, and .992 respectively.

5. The Association has not adequately supported the methodology proposed for trend calculation as one that is appropriate to the task. It has also failed to establish the reasonableness of a specific value of 1.067 for the medical trend factor. A factor of 1.000 should be adopted until more and higher quality information is provided to justify a trend factor.

6. The uncontested factor of .965 should be adopted as set forth in the petition to recognize the change in the assessment rate for the special compensation fund.

7. The Association has failed to establish the reasonableness of recognizing the effects of legislation with the composite factor of .940 as contained in the petition. A factor of 1.025 is consistent with this Order and should be adopted.

8. The methodology used in the petition to reflect a limitation in insurer-controlled expenses is reasonable in view of the record and should be adopted.

9. The Association has failed to establish the reasonableness of a 62.2% permissible loss ratio, a combined ratio of 97.5%, and an underwriting porofit loading of 2.5% as contained in the petition. These related elements result in rates that are excessive.

10. The Association has established the reasonableness of an expense allowance of 35.3% per premium dollar as set forth in the petition and this expense loading should be adopted.

11. Together with the other factors and elements contained in the petition and consistent with this Order, a permissible loss ratio of 74.7% as derived from a combined ratio of 110% results in rates that are not excessive or inadequate, and should be adopted.

12. The cumulative indication for modification in the manual premium rate level that is arrived at using the factors consistent with Findings one through eleven indicates a manual premium rate level increase of 11.8%. This change in manual premium rate level is not excessive, inadequate, or unfairly discriminatory and should be adopted. The following summarization of changes displays this finding:

	Individual Effect	Cumulative Effect
Policy year experience	1.139	1.139
Trend factor	1.000	1.139
Special compensation fund	.965	1.099
Effect of Legislation	1.025	1.127
Limitation on company controlled expenses.	.992	1.118

13. The Association has established the reasonableness of the premium discount methodology set forth in the petition and premium discounts that are appropriately adjusted for a 110% combined ratio with no explicit profit and contingency factor should be adoped as follows:

Premium		Discount
First	$1,000	0.0%
Next	$4,000	9.8%
Next	$95,000	14.0%
Over	$100,000	15.5%

14. The Association has established the reasonableness of the adjustment set forth in the petition to comply with Minn. Stat. Section 79.211, subd. 1, and this 11.1% adjustment should be adopted. This factor in itself raised manual premium rates to offset a decrease in premium base but has no effect on the premiums ultimately paid for workers' compensation insurance.

15. The Association has established the reasonableness of amending pure premiums for certain individual classifications in accordance with the methodology in the petition and the proposal should be adopted.

16. The Association has established the reasonableness of (a) combining certain classifications and amending accordingly the classification assignment; (b) reassigning certain low credibility classifications, and (c) amending the retrospective rating plan in accordance with the petition and these uncontested proposals should be adopted.

17. Any calculation not specifically addressed in this Order and necessary in deriving rates for specific risk classifications should be calculated by the Association in accordance with the factors contained in these Findings.

18. The Association should arrange to tender an actuarial witness who has been privy to and participated in the workings, decisions, and judgments entered into by the Association's actuarial committee during any forthcoming rate hearing.

19. The Association should analyze the consistency of reserve margins, the impact of the margins on factors calculated by the Association, and include the results of the analysis in the next forthcoming rate petition.

20. The Association should study and consider the use of non-Minnesota data to supplement Minnesota data for low credibility classifications in accordance with this Order.

21. The Association should include the following data in any future petition:

    (a) The claims payment pattern assumed by the Association.

    (b) The assumption made by the Association concerning investment yield.

    (c) The required return on surplus assumed by the Association.

    (d) The financial leverage assumed by the Association.

    (e) A separate estimation of the investment earnings on premium dollars and surplus dollars.

    (f) All pre-filed testimony to be offered in support of its petition.

    This data must be included in an appropriate model which will demonstrate the actual returns expected by insurers.

22. In arriving at these findings and conclusions, the Commissioner has considered all evidence offered and received by the parties to the evidentiary hearings.

VI.
ORDER

It is therefore ORDERED that:

1. The rate level increase set forth in the petition shall be rejected.

2. An overall manual premium rate level increase of 11.8% shall be adopted as consistent with this Order. This increase shall only apply to new and renewal policies with effective dates on or after the effective date of this Order.

3. The Association shall perform all necessary and appropriate calculations which are consistent with this Order to derive rates for specific risk classifications.

4. The classification reassignments and combinations set forth in Association Exhibits E-I and E-II shall be adopted and incorporated in the classification system for workers' compensation.

5. The revisions to the retrospective rating plan as set forth in the petition shall be adopted.

6. The effective date of this order shall be June 1, 1981. The Association shall file a complete schedule of rates with the Commissioner as soon as reasonably possible for approval. All policyholders who have received or will receive renewal notices which do not incorporate this this Order, but whose policies are effective after the effective date of this Order shall be notified of the change prior to July 1, 1981.

It is further ORDERED that:

1. The Association shall conduct an analysis regarding the calculation of development factors and reserve margins as outlined in the Order and shall submit this analysis and conclusions as part of the next forthcoming rate petition.

2. The Association shall study and consider the use of non-Minnesota data to increase the credibility of low credibility classifications and shall either:

(a) Submit the study and conclusions as part of the next fothcoming rate petition, or

(b) Submit a plan and timetable for conducting such a study to the Commissioner for approval prior to the filing of the next forthcoming rate petition.

3. The Association shall provide the information described in paragraphs (a) through (e) below as a part of the next forthcoming rate petition together with an appropriate model for determining expected results:

(a) The claims payment pattern assumed for claims arising out of the effective period.

(b) The investment yield assumed for money invested by insurers.

(c) The assumption used by the Association regarding the required return on insurer surplus.

(d) The assumption used by the Association regarding financial leverge.

(e) A separate estimation of the earnings arising from premium dollars from the effective period and from required surplus dollars.

(f) All pre-filed testimony to be offered in support of its petition.

The Commissioner specifically retains jurisdiction of the matters contained herein and the authority to issue such further order or orders as he shall deem just, necessary, and appropriate.

MICHAEL D. MARKMAN
Commissioner of Insurance

ATTACHMENT I

Estimated Rate of Return at 97.5% Combined Ratio

Assumptions:
1) All loss and expense percentages as per the petition, with all expenses but for loss adjustment assumed to be paid at the beginning of year #1.
2) Claims payment pattern as per Staff witness Kramer, with first year payments assumed to be paid at the beginning of year #1.
3) 7% after tax investment return on both reserves and surplus.
4) Reserves to surplus ratio of 3:1 and release of surplus in excess of one-third of reserves.
5) Underwriting profit taxed at 46%.
6) $100,000 written premium.

End of Year	Loss Reserves	Required Surplus	Interest Income	Under-writing Profit	Return of Surplus	Total Income
1	62,814	20,938	5863	2500	6003	13,216
2	44,805	14,935	4182		3706	7,888
3	33,687	11,229	3144		2098	5,242
4	27,392	9,131	2557		1335	3,891
5	23,388	7,796	2183		865	3,048
6	20,792	6,931	1941		722	2,662
7	18,627	6,209	1738		537	2,275
8	17,017	5,672	1588		479	2,067
9	15,580	5,193	1454		388	1,843
10	14,414	4,805	1345		349	1,694
11	13,367	4,455	1248		326	1,574
12	12,388	4,129	1156		303	1,459
13	11,479	3,826	1071		3826	4,898

Internal Rate of Return = 30.5%

formula: internal rate of return = i when $\sum_{t=1}^{13} \frac{R_t}{(1+i)^t} - C = 0$

where R_t is cash flow at time t
and C is initial surplus

ATTACHMENT II

Estimated Rate of Return at 110% Combined Ratio

Assumptions: All assumptions as with the previous example except that losses are assumed to reflect a combined ratio of 110% and a negative tax is assumed for the underwriting loss.

End of Year	Loss Reserves	Required Surplus	Interest Income	Under-writing Profit	Return of Surplus	Total Income
1	74,128	24,709	6918	(10,000)	17,084	18,603
2	54,875	17,625	4935		4374	9308
3	39,754	13,251	3710		2476	6186
4	32,226	10,775	3017		1575	4592
5	27,600	9,200	2576		1021	3597
6	24,538	8,179	2290		852	3142
7	21,982	7,327	2052		633	2685
8	20,082	6,694	1874		565	2439
9	18,837	6,129	1716		459	2175
10	17,011	5,670	1588		412	2000
11	15,774	5,258	1472		385	1857
12	14,619	4,873	1364		358	1722
13	13,546	4,515	1264		4515	5780

Initial surplus required: 34,709

Internal Rate of Return = 18-18.5%

formula for calculating internal rate of return as before

DIRECT TESTIMONY OF

DONALD KRAMER

Q - Please state your name and address

A - My name is Donald Kramer and my business address is 1185 Avenue of the Americas, New York, New York

Q - What is your occupation?

A - I am chairman of Kramer Capital Consultants Inc. (KCC), a management consulting firm.

Q - Please describe the nature of services performed by KCC.

A - KCC is a financial consultant. It performs appraisals, evaluations, economic studies and financial planning services for the insurance industry. KCC has undertaken major studies on insurance company capital requirements, insolvencies and competition. We have also reorganized insurance companies, provided management advice to troubled insurers and have assisted regulators in the supervision of domestic insurers. KCC has performed numerous services for insurance regulators, industry and others. I refer you to the biography set forth as Appendix I to this testimony.

Q - Please describe your educational background.

A - I received a BA degree in Economics from Brooklyn College in 1958. I received an MBA in Finance and Investments from New York University in 1964.

Q - Please describe your past employment history.

A - I was a bond analyst with Moody's for a period of time during 1958. From 1959 through 1961 I was employed as a securities analyst with Bache & Co. During 1961 I joined a firm called Reiner Linburn, a member of the New York Stock Exchange, where I served as a research manager and securities analyst. In 1962 I joined Markus and Stone, the predecessor firm to First Manhatten Company. There I was employed for seven years as a securities analyst and subsequently, a general partner. At the end of 1969 I joined Oppenheimer & Co. as a general partner and remained there for 5 years. Finally, in March of 1975, I formed my own firm, Kramer Capital Consultants.

Q - Are you a member of any professional societies?

A - I am a chartered financial analyst (CFA). I am a member of the New York Society of Security Analysts, a member of the Association of Insurance and Financial Analysts, and a member of the Financial Analysts Federation.

Q - What particular aspects of your background would you emphasize as qualifying yourself as an expert in the measurement of insurance industry profitability?

A - I have been a financial analyst of insurance companies for approximately twenty years, specializing in the Financial and insurance industries. I have been involved in mergers, acquisitions, reorganizations, and appraisals of insurance companies. I have been a consultant to the insurance regulatory agencies of Wisconsin, Illinois, Michigan, New York and Virginia on matters related to financial solvency of insurers. Additionally, I have served as a financial expert in a number of matters involving litigation. Finally, I testified as an expert witness on behalf of the Massachusetts Automobile Rating Bureau in connection with an automobile insurance rate hearing in 1975.

Q Mr. Kramer, your firm has been retained by the Insurance Division of the state of Minnesota in connection with the 1980 Workers compensation hearings. Would you describe your role in these proceedings?

A Kramer Capital Consultants Inc. (KCC) has been retained as part of a team to assist the Minnesota Department of Insurance in determining fair, equitable and non discriminatory workers compensation premium rates for 1980.

KCC's principal role will be to help the Insurance Department more accurately measure the expected returns that will be earned by the insurance industry on any given level of premium rates, projected cash flow and investment income assumptions. Working with actuaries (Tillinghast, Nelson & Warren), accountants (Arthur Anderson & Co.) and economists (National Economic Research Associates) KCC will assist in finding a proper rate of return on equity that will fairly compensate the insurance industry for its risk in writing workers compensation. In making this determination KCC will consider the expected results on 1980 business only and will not charge 1980 policyholders with either excessive or inadequate profits from prior years events. Further, KCC will consider income from all sources, both underwriting and investment in an attempt to more accurately measure revenues, expense and profit.

Q How will you more accurately measure revenues, expense and profit?

A To accomplish this, we have utilized a simulation model which can project year by year income and expense based on certain given assumptions. For example, we have concluded that based on a 106.8% combined ratio and given current investment yields and mix, the insurance industry is capable of earning a significant return on investment.

Q Is that return based on nationwide data or Minnesota data?

A Both, and it is supplemented by empirical observations in the real world.

Q Can you describe the workings of your model?

A I can, but I think it is important first to describe the workings of the insurance industry.

Q OK, then describe the workings of the insurance industry as you see it.

A Insurance revenues are derived from two basic sources: 1) premiums paid by policyholders and 2) investment income on assets. The two are an integral part of the overall insurance transaction and cannot and should not be viewed separately as has sometimes been the case in insurance ratemaking. Premiums in the broadest sense, including retrospective premiums and investment income from all sources as well as capital gains, constitute total insurance revenues.

Expenses in an insurance operation on the other hand fall into four broad categories: 1) sales or acquisition expenses, 2)

administrative expense, 3) claims cost and 4) taxes. The difference remaining between revenue and expense can be described as profit. This very simple, accurate and direct description of the insurance industry's financial flows are contained in Exhibit A - entitled Property and Liability Insurance Financial Mechanics. Please note that the terminology used to describe the basic variables was designed to be general and all encompassing and avoids insurance statutory terms which would only complicate and confuse the issue at this time. Consequently, our definitions are as follows:

1. By insurance premiums we mean all charges paid by the policyholder.
2. By sales expense we mean commissions and all acquisition costs.
3. Trust funds are the net of all reserves, capital and liabilities less fixed operating and uninvestable assets such as furniture and agents balances.
4. Investment income contemplates interest dividends, rents and capital gains either realized or unrealized.
5. Claims for our purposes include all payments to insureds including claim adjustment expenses.
6. Administrative expenses are fairly straight forward although it should be noted that we have expanded the definition to include taxes.

7. What remains from revenues less expenses is defined by us as the change in surplus. This is the net economic return.

While this description of insurance income and expenses is simple, it should be noted that for any single policy year it may take many calendar years to accurately determine the true change in surplus as described above because claims are actually paid over long periods of time during which investment income accrues. The computer simulation model we have constructed demonstrates very clearly these financial flows over time for both a single year and for many years compounded. We will describe it in detail later.

Q Are there several points you can make now regarding these financial flows?

A Yes. One: For the policies of any given year, many years are required to actually add up revenue and expense to find "true" profit.

Two: The financial results of any insurer for a single calendar year represent the cumulative results of transactions in progress from all prior years.

Since we do not wish to influence the 1980 policyholder by either the sucess or failure of prior years' events, it is important that we ignore most industry historical financial reports except to the extent that they can shed some light on the 1980 outlook.

In short, insurance profitability can be measured very accurately by hindsight, the more difficult task is to measure it

by foresight. This involves the utilization of specific forecasts or assumptions and necessarily some measure of risk.

Q What are these risks?

A The two principal risk elements in the insurance process are investments and claims. In the attached Exhibits I have tried to identify and isolate the statutory impact on changes in surplus of investments and claims. There are several other uncertainties such as premium collections or the level of administrative expenses but they are generally small in the overall picture. The overall flow is described in Chart I.

Chart II follows the same path but isolates for observation the investment risk elements. It shows the specific outcomes that could be expected under alternate investment strategies. Strategy A for example, assumes all trust funds are invested in short term treasury securities at a 6 3/4% certain yield. Strategy B assumes that all trust funds are invested in common stocks which we have assumed for purposes of this analysis can either increase or decrease 25%. These are very extreme black and white scenarios. In the real world there are hundreds of gradations such as differences in maturities, classes of securities and portfolio mix.

Since we are isolating only investment variations in this illustration, we have assumed a single specific level of claims and administrative expenses. The consequent changes in surplus represent the range of alternate outcomes created by the various investment policies. In short, the first risk element encountered in the insurance process is the investment risk occasioned by alternate investment strategies.

The second principal risk element is the underwriting risk. Insurance companies price their product before they know their cost of goods sold, hence an uncertainty exists. Unlike most other industries where liabilities are known, an insurance company's liabilities are indefinite. For example, if a bank reported notes due of $50 million on December 1, we could assume its liability for that note is precisely as stated, whereas if an insurance company reported reserve liabilities of $50 million, it could actually prove to be $40 million or $60 million. Furthermore, it is not certain whether or not the reserve liabilities will actually be paid on December 1 or January 1, or even within the next calendar year. In short, the second risk element in the insurance transaction is the uncertainty of its underwriting outcome. Chart III isolates this element and freezes all the others. It shows the possible changes in surplus created by alternate claims scenarios.

Chart IV more accurately describes the real world. It shows the possible outcomes engendered by the interaction between an uncertain investment policy and an uncertain claims policy.

Q Is it your professional opinion that this accurately describes the

insurance industry?

A Yes. I believe we have accurately described the financial flows and principal risk elements inherent in the insurance industry. To add more meaning to this analysis, however, I would like to include one further nuance; a description of "long" and "short tail" business.

Q Would you define "short tail"?

A Simply defined, a short tail line of business is one in which the loss reserves are paid out rather quickly; for example, automobile physical damage insurance. In this line of business most claims are both known and paid within the policy year. Within six months after the end of the year the line is almost fully developed. Thus, this line has several economic characteristics which can be described as follows: a) it generates a comparatively small amount of investment income, b) investment risk is a less important factor in the variation in total profits than is the case in longer tail lines, and c) underwriting income tends to be skewed profitably. There are two reasons for this: 1) there is less investment income to compensate for underwriting losses and 2) prices can be set closer to the ultimate loss event. It is described in Chart V-a.

Q What about "long tail" lines?

A Long tail lines have the opposite characteristics. Loss reserves are paid out over a considerable time period and the accumulation of investment income becomes a critical variable in determining the ultimate outcome. Furthermore, underwriting income tends to be skewed negatively since there is a greater cushion from investments

and because the price is established so far in advance of the actual event. Workers Compensation is an illustration of a longer tail line of insurance, so is straight life insurance. This is shown in Chart V-b.

Q What is the importance of this difference between long tail and short tail lines?

A The distinction between long and short tail insurance is critical, particularly in a ratemaking case, because it permits focus on the proper priorities. This can be demonstrated by a simple financial illustration. If we assume that investment income accounts for the bulk of an insurance company's total income in workers compensation, (a traditionally long tail line) and further that a 2.5% underwriting profit margin produces the balance; then we can express the dollar levels of pretax profit with average interest rates at 5% in a simplified income statement as follows:

Premiums	$100.0
Losses & Expenses	97.5
Underwriting Income	2.5
Investment Income (at 5% yields)	8.5
Total Operating Income (Pre-tax)	$ 11.0
Income as a % of Premiums	11%

If, in a second illustration we assume the same 2.5% profit margin but we assume that interest rates prevailing over the period rise to 10%, then our income statement would be as follows:

Premiums	$100.0
Losses & Expenses	97.5
Underwriting Income	2.5
Investment Income	17.0
Total Operating Income (Pre-tax)	$ 19.5
Income as a % of Premiums	19.5%

Clearly then, at a constant underwriting margin, rising interest rates produce rising profit margins.

Q What is the significance of this observation?

A If our objective is to set a fair return on equity at a specific level, then as interest rates rise, the requirement for underwriting profits diminish.

This simple demonstration points out the fallacy of utilizing a fixed underwriting profit margin in insurance ratemaking. A fixed underwriting profit margin on a long tail line of business rewards the insurance industry generously for rising interest rates by increasing their net profit margin.

Q Are you referring to the 2.5% underwriting profit requirement that Minnesota insurers are requesting at their current rate filing?

A Yes, the use of a 2.5% fixed underwriting return as a ratemaking formula in today's high interest rate environment is both incorrect and unfair. It ignores the industry's principal source of income.

Q If we accept your statement that a positive underwriting profit margin of 2.5% is incorrect, then is there some positive underwriting margin that is correct?

A No. The proper underwriting margin could be positive or negative depending upon the level of income from all other sources. The purpose of the previous simple illustration was to demonstrate the fact that workers compensation profit is very sensitive to changes in interest rate levels. For ratemaking purposes, we believe income from all sources should be considered.

Q Do you believe that the insurance industry is currently losing money on workers compensation in the state of Minnesota because the underwriting profit margin has been negative during the last year?

A No, I don't. I believe the industry is earning money. However, the question is complex and requires a prolonged answer. I believe I can demonstrate by the use of a simulation model that the insurance industry will earn a significant operating profit on 1978 workers compensation insurance even though the underwriting profit margin as reported by the National Association of Insurance Commissioners, and as expressed in terms of a traditional combined ratio was negative by approximately 6.8 points or 106.8%

Q You used the term "will" earn a significant profit. Isn't 1978 over, and shouldn't you use the past tense.

A No. That is one of the reasons the answer is complex. First, I stated that no single policy year should be affected by gains or losses from any prior policy year. Second, I indicated the fact

that the events of any one policy year extend over many calendar years. This is a difficult concept to comprehend. When someone views a traditional financial statement for an insurer, they are looking at a composite of all prior policy years. In short, most data available for the insurance industry is cumulative. As such, most of it is irrelevant as far as this hearing is concerned. Instead of viewing much meaningless cumulative data, we want to single out one year, for instance 1978 or 1980. For example, 1978 premiums were collected during that year and into the next calendar year. Some additional charges like retrospective premiums may also have been collected after the close of the year. Certain expenses like commissions and other acquisition costs however, were probably paid in the first 12 months. Claims (or losses) on the other hand, were reported as "incurred" but were not necessarily paid. In fact, in a typical workers compensation situation, only about 28% of the actual losses reported in the first year are actually paid. The balance are held in a reserve. The actual final payments of all claims incurred in 1978 will not be complete until 2008 and perhaps even later. Since we will not truly know the net of revenues and expenses on 1978 business until some indefinite time in the future, I used the term "will" earn a profit instead of "did" earn a profit.

Q Does that mean we can't measure it for thirty years?

A We certainly can't measure it precisely, but we can do a good job of approximating it. That is the sole purpose of my flow chart and simulation model. We want to more accurately measure

profitability.

Q How?

A Let me describe my simulation model in general terms and then we will proceed through a series of steps to become more specific.

1. We constructed a computer simulation model which goes through all the steps an insurance company goes through. It accounts for premiums, accepts certain assumptions as to losses, payout patterns and investment yields and reproduces an insurance company balance sheet and income statement on a traditional statutory and generally accepted accounting principles (GAAP) basis.

In the specific model we used, the distinction between statutory and GAAP was irrelevant since we developed a policy year out to extinction.

For purposes of our model we assumed premiums of $100,010,000. This was merely a convenient denomination so that we could alternatively speak of the income per $1 of premium.

The transaction for our purposes represents a single policy year. The theoretical insurance entity writing this policy has virtually no tangible assets and no surplus initially. Thus, the transaction measures most clearly the "true" insurance return. There is no distortion from invested capital or from the cumulative events of many policy years. In its simplest sense, at the close of the transaction when all claims are paid there is either surplus left (in which case, the entity had a profit) or a deficit, in which case it had a loss. Each year's events are shown separately.

Included is a balance sheet and income statement. Much of the rest is self explanatory. The runs are included in this filing as Exhibit B.

Let me dwell on the specific assumptions. I said there would be $100,010,000 of premiums and no capital. There are several other key assumptions to understand in the initial model. The most important of which is loss payout patterns. Using a combination of Minnesota and non Minnesota data adjusted to account for the new reinsurance facility we developed a schedule of expected payments for each year up to 14 years. The second major assumption involved investments. In our first run we used the historic industry investment mix and average yields and maturities as reported by A.M. Bests for 1978.

Q Why did you use 14 years for loss payouts?

A For simplicity's sake. I recognize that a workers compensation loss payout could extend over 30 years, but the added significance and cost of such an extensive computer run wasn't worth the price. I had already captured 98% of the significance of the transaction. Instead of trying to measure the remaining 2% I closed the policy year out by assuming final payment of all outstanding loss reserves. Generally, after 14 years all policy year claims are well known; reserves are adequately established and the cost of the cases remaining unpaid are actuarially predictable. In essence, I made a simple assumption that it would be possible to reinsure the liability by transferring the reserves at or near stated value.

Q OK so your assumptions are $100,010,000 of premium; a 106.8%

combined ratio after policyholder dividends; historic payout patterns and historic investment mix and yield. What are your observations and conclusions and how do I relate them to ratemaking?

A If you follow the flow in the exhibits under the illustration labeled "payout of losses" in Exhibit B you can reach a number of conclusions but the principal one is that after all claims are discharged (14 years) an insurer with no initial capital would have $19,708,600 left after taxes on $100,010,000 premiums even though underwriting margins were negative.

I recognize that I have thrown a considerable amount of data at you. I suggest you go through all the pages in our output in order to familiarize yourself with the format. As you do, let me make some comments beginning with page 1. A lot is self explanatory, but a quick run through will help you understand our subsequent analysis.

The following is a description of the key elements of a computer simulation of Minnesota Workers Compensation Insurance entitled "Payout of Losses". Page 1 shows premiums written and earned for a single policy year 1980. Since all premiums written are presumed earned, both statutory and GAAP data will be essentially identical. The losses and loss adjustment expenses were assumed to be equal to 87.4% of premiums. Expenses were divided into two parts, acquisition and general. Together they equaled 19.4% of premium resulting in the indicated combined ratio of 106.8%. In this illustration policyholder dividends were assumed to be included in the losses. The net of the premiums less claims and

expenses is labeled "Pre-tax Underwriting Gain". The next item is labeled "change in investable funds". That is, the calculation of the cash flow from insurance without consideration of the reinvestment of interest income. Note, the negative change in investable funds each year after 1980. This reflects the annual payout of claims. A complete schedule of sources and uses of funds entitled "Changes in Financial Condition" is displayed in the last four pages of the run. The series of combined ratios on an earned premiums basis are not a significant part of the run, although they were designed into the model. They have no value in this illustration and may be ignored.

Page 2 is a continuation of Page 1 through 1993.

Pages 3 and 4 show the annual amount of investment income derived from each source. It is based on average funds available for investment during the year. The yields as indicated are historic. It will be noted later that the industry is investing new money at much higher returns. Nevertheless, in this run we used historic yields. Pre-tax investment income is then combined with underwriting income and taxes are calculated based on the respective portions of taxable income. In the first year of the illustration there is a taxable loss and an equal negative change in surplus.

Pages 5 and 6 may be ignored. They are repeats of 1 and 2, since we have assumed only one line of business as being equal to all lines.

Pages 7, 8, 9 and 10 are the asset and liability statements constituting a conventional balance sheet. The classes of securities are as follows:

Bonds Type	1	U.S. Governments
	2	Municipals (tax exempt)
	3	Special Revenue (tax exempt)
	4	All Other Corporate (taxable)
Equities Class	1	Common Stocks
	2	Preferred Stocks

On the liability side the accounts are self explanatory. Since no paid in capital stock or surplus is assumed, the change in unassigned surplus may be considered to accurately reflect the effect of the "pure" insurance transaction. As indicated in the exhibit, by year end 1993 after all claims are discharged our hypothetical insurer has $19.7 million remaining in surplus. In short, a dollar of premium at a 106.8% combined ratio produced a cumulative profit of 19.7% at the end of 14 years.

Pages 11-20 repeat the exercise on a GAAP basis. Since we are dealing with ultimate developments, there are no prepaid acquisition costs and hence GAAP and statutory are identical. Pages 21-24 represent the changes in financial condition and will allow the analyst of the data to track all of the cash, claims and investment flows.

Q Allright, you have described your model. Now how do I interpret the data and how can I use it?

A I already showed you one way. Using investment underwriting and payout assumptions for Minnesota data, it was possible to demonstrate that a 106.8% combined ratio would produce a significant net profit after taxes over time.

Let me see if I can relate that data to the measurement of a current return on equity. This involves some further assumptions. First, we must determine some ratio of premiums to surplus in order to find the appropriate amount of capital required. Second, we must find a rate of return on the capital itself. To develop assumption one, we chose the historic average ratio of premiums to surplus for all companies, for all lines based on reports from A.M. Best. The amount was $1.92 in premium for each $1 of surplus. Generally, regulators permit ratios of up to 3:1 without much concern. As to the raw return on capital, I am assuming a net yield of 6% after taxes. It can be achieved by investment in a wide variety of securities, for example:

a) Investment in municipal bonds at 6%.
b) Investment in preferred stocks at yields of 6.5% or better
c) Investment in common stocks at yields of 6.5% or better.
d) Investment in corporate or U.S. Government securities at yields of 11.9% or better.
e) or some combination of the foregoing.

Now, to determine return on equity I can make the following initial calculation:

Equity = $1.0

Premiums Written = $1.92

Surplus remaining per $1 of premium at a 106.8% combined ratio at the end of the 14th year = $1.97[1]

Total operating income, 14 years cumulative change in surplus times leverage = $.38 ($.197x1.92 leverage)

Raw return on capital = $.06

Gross return on capital = $.44 ($.06+$.38)

(1) This is the same as cumulative operating income.

In summary, by putting up $1 of capital an insurer can expect an ultimate return of 45% on the cumulative net of one year's business.

Q Is this the same as his return on equity?

A Not exactly. Several other items must be taken into consideration. For example, the time value of money is significant, or the fact that a single pool of capital can support many successive years of premium writings. If you recall, I previously pointed out the fact that an insurer's financial report for a single year really reflects the cumulative reserves, and investment income of all prior years. In order to find the approximate return on equity, we can approach the problem two ways.

Q Would you describe them?

A In the first instance we can discount to present value the expected future stream of income. Using the same after tax rate as we use on raw capital, a 19.7% return on premiums reduces to a 12.6% present value. Using the same methodology as described previously, an insuror could expect a 30.2% return on equity from a single year's premium at a 106.8% combined ratio with income discounted to present value.

The calculations were as follows.

Return per $1 of Premium =	.197%
Discounted to present value	.126%
x 1.92 ratio of premiums =	24.2 %
+ After tax return on raw capital	6.0 %
Return on Equity	30.2 %

Q Are you saying therefore that if the insurance industry operated at a 106.8% combined ratio in 1980 it could expect a 30.2% return on equity?

A No. I think it would be higher.

Q Why is that?

A Because in the model I referred to earlier, I used historic yields based on existing portfolios. In fact the insurance industry will be receiving money in 1980 for investment in the future.

Q How significant is that fact?

A Very. If you recall I said that investment income was a critical variable in workers compensation. Let me illustrate how important it really is. In a second model entitled "present yields with even portfolio distribution" I took the identical assumptions from the first model and changed only the interest rates for each class of security to reflect present yields. In that illustration the surplus remaining at the end rose to 43.3% of premiums compared with 19.7%.

Q Do you mean that the expected profit doubled?

A Precisely. By simply increasing yields expected profits rose dramatically. This illustration reinforces the very simple model I

made at the outset showing that insurance company operating profits rose substantially with the level of interest rates. It also raises another significant point. In setting premium rates for 1980, historical yields are not a good guide. The insurance industry can no more go back and buy 5% corporate bonds than I can go back and buy that super growth stocks I missed in 1974. The insurance industry will be receiving investment funds in 1980 for future investment, and it is the expected return which should be calculated into the ratemaking formula.

Q We've digressed a bit. You previously said there were two ways to find return on equity. You only described one using a discounted present value. What was the second?

A The second is merely an expression of the expected return in a going concern environment. That is, the return that would be produced in a single year if all prior years were identical. We simply constructed a model entitled "Minn 3 with Capital" which creates a company from the ground up using initial capital of approximately $50 million writing premiums of 1.92:1, with a virtually risk free investment portfolio (invested at less than optimum returns). While computations for all years are included, the only significant years to view are years 14 and 15, since they are the only ones that constitute a complete cycle. Without going into an elaborate discussion of all the data contained in the exhibit, let me state that income in the mature years totaled $20.8 million compared with surplus of $52.0 million.

Q Do you consider this a benchmark of what the insurance industry would be earning if a 2.5% profit formula were used?

A It is conservative. I said that it reflected a less than optimum investment strategy and I previously demonstrated how significant a change in investment yields is.

Q So far you've expressed a lot of theory about the ultimate outcome of various underwriting and investment scenarios. Do you have any tangible examples of your views?

A There are some. It is not easy to find a going insurance company that writes only workers compensation. Most write all lines. I can cite the case of one workers compensation company in my files, however, that reported a 98.6% combined ratio which is close to the 2.5% profit level that is being asked for by Minnesota insurers which with historic yields reported GAAP earnings after taxes equal to 32.9% of GAAP equity. This certainly substantiates my contention that the industry can earn very high returns on this line with a very small underwriting profit and less than optimum investment yields. The one other point I want to make is that my model is practical rather than theoretical. If you give it the right assumptions it will produce the right answers. In short, it expresses the outcome that actually will be realized by an insurer under a selected set of circumstances. My model goes through virtually all the insurance company accounting procedures to produce balance sheets and income statements. It also tracks with the flow charts I showed you earlier.

Q How can your model be used in rate making?

A. As an analytical tool. The model can help assess any rate making proposal by relating it to a more accurate expected return on equity than is now available from rating bureau material. Moreover, it produces a balance sheet and income statement which is easier to relate to. As well, working backward it can be used to determine the proper loss ratio or combined ratio that would be needed to achieve a desired return on equity given specific investment assumptions.

Q Can you be more specific about how your model is being utilized by the Minnesota Insurance Department in connection with this case?

A First, it is being used to demonstrate the sensitivity of workers compensation insurance to changing interest rates. We showed that if nothing changes except current yields, profits on compensation double. This leads to a reexamination of the 2.5% profit formula which the rating bureau alleges is a proper target.

Second, it evaluates the 2.5% profit formula in terms of an expected return on equity. In a model entitled "Lower Loss Ratios" included in the exhibits we displayed the results for a single policy year using a virtually risk free investment policy and a 2.5% profit margin. The ultimate net surplus remaining after payment of all losses was $25,035,600. By discounting that result and applying the same adjustments for leverage and capital that we did earlier, we can state that the return on equity would approximate 39.9%. Moreover, the real return would be even higher if the industry optimizes its after tax return by investment in tax exempt or partially tax exempt securities.

We supplemented this with an empirical observation using actual results for a real company that had a profit margin of 1.4%, with a return on equity of 32.9% thereby supporting our conclusions. Finally, we believe our model can be used as the focal point for future ratemaking by requiring the industry to submit the important input data on loss payout patterns, investment assumptions and rate of return requirements.

Q You have persistently focused on return on equity as your most important financial benchmark. Do you consider it the key criteria to consider in rate making.

A That is correct. In fact, I think the objective of good management is to maximize return on equity and I believe that it is the single best measure of financial performance.

Q What about other measures such as return on assets or return on total capital?

A These benchmarks can be very misleading, especially when comparing a financial industry like insurance to the industrial sector of the economy. In the case of industrial companies, return on total capitalization helps facilitate analysis between different entities utilizing different degrees of leverage. When comparing a financial company to an industrial however, return on total capitalization or assets has no relevance. For example, the return on assets for leading banks runs from a high of just under 8 tenths of one percent down to 3 tenths of one percent. This compares with

an after tax average return on total capital for industrial companies of 10% or more. Perhaps a simple illustration will demonstrate the non-comparability between return on total capitalization in industrial and financial companies. The details are contained in a memo appearing in the exhibit C. Simply stated, if an industrial company and a financial company seek a common objective of a 6% return on total capitalization, the former will experience a 12% return on equity while the latter will realize a 54% return. Certainly in this example it is hard to see the comparability in using return on total capitalization.

Q What about the insurance industry specifically?

A In the insurance industry liabilities due policyholders may be viewed as being comparable to debt. If that is the case, then an underwriting loss may be regarded as the cost of servicing that debt. That reinforces our view that income from all sources be considered. Looking at it from the other side, if the cost of debt is zero, then the permissable return on debt should be zero. This reinforces our view that return on equity is the single most important benchmark.

Q Thus far you have focused on return on equity and how to measure it, but you have not talked a great deal about risk. How do you relate the return on equity to the risks being assumed?

A This is not easy. Let me first refer back to the original flow charts enclosed in exhibit A. You will recall that I noted that there were two significant risks, underwriting and investment together with a few less significant ones such as the level of

expenses. I further indicated that the nature of the risk varied with the tail of the business.

Since this market is relatively efficient, and in an efficient market there is presumed to be a linear relation between risk and return, we can assume that the return required is correllated with the risk.

In Exhibit D we selected a sample of two groups of property and liability companies. The first four specialize in workers compensation insurance. The next six are large multiline companies that write workers compensation. Our first observation is interesting. The workers compensation companies sell at an average of 8.7 times most recently reported earnings. That means that an 11.5% return on equity is required by this group in order to satisfy investors in raising new capital. Our second observation is that the multiline companies sell at an average of 5 times. This means a 20% return on equity is required to satisfy investors. Our third observation is that workers compensation companies require a lower return on investment to satisfy investors than do multiline companies, hence a presumption that the market regards this line as less risky. I would now state that I believe that insurers should be adequately compensated for their risk and that the permissable return on equity be related to the level of risk assumed. My problem is measuring the level of risk. One way to do so is to utilize contemporary stock market valuations as a proxy for risk. The price/earnings level at which insurance stocks sell is an indicator of the rate of return on equity required by the

stock market for insurance companies to raise new capital. Our fourth observation is that the appropriate rate of return on equity for workers compensation probably falls somewhere between 10 and 20% after taxes. In my opinion, the latter amount would be the maximum levels compensatory for the risks.

Q That is a significant range. Can you be more precise?

A I would like to but I don't think I can, using that methodology.

Q Is there another way to approach the problem?

A Yes, but it requires some description and incidentally, was implicit in some of my models contained in Exhibit B. You will recall the fact that I said the investment risk was more significant in workers compensation than in other lines of business. By using an essentially "risk free" investment strategy I can remove entirely the investment risk, leaving only the underwriting risk to be considered.

Q Would you explain this in greater detail?

A Yes. In each of my models I noted the expected payout pattern of workers compensation claims. If I devise an investment strategy which assumes investment in U.S. treasury securities with maturities matched to these payout patterns, then I have assembled an essentially "risk free" investment program. U.S. Treasury securities are considered to be the highest grade investment an insurer can make. Moreover, with matched payout patterns there is no maturity risk.

This has several important advantages for the insurance industry. Use of a "risk free" interest rate assumption in ratemaking allows the individual insurers to determine its own risk-reward criteria. For example, if a 10% return on equity after taxes proves to be the lowest common denominator based on a risk free investment program, then an individual insurer could achieve a 20% or 30% return on equity by assuming a greater degree of risk. For example, simply by switching from triple A rated treasuries to triple A rated municipals an insurer could naturally increase the after tax return on equity. Use of preferred stocks, whose dividends are roughly tax free to an insurer, would produce an even greater step up in return. In short, use of a "risk free" policy as a base offers the insurance industry significant flexibility in its ability to earn a much higher return on equity than permitted under a rate formula. It has a further salutory benefit. It divorces the policyholder from the uncertain consequences of an insurer's investment program. It does not seem logical in ratemaking to have one company charge lower premium rates on workers compensation because it took a successful risk in common stocks while another insurer is permitted to charge more on workers compensation because it lost money in common stocks. Use of a common investment denominator eliminates all of these problems. Further, it reduces materially the risk on workers compensation, limiting the variation to uncertainties as to underwriting, and even this variation is materially reduced by the Minnesota Reinsurance Facility. For roughly 2% of premiums, all claims over $300,000 are reinsured.

Q Then are you saying that writing workers compensation involves very little risk?

A Under the foregoing assumptions it does.

Q What then is a proper return on equity, using your methodology?

A I am not completely sure at this time since I have not had the beneft of the input from several other members of the team, but I would go so far as to say that an 11% after tax return on equity seems adequate from my observations expressed earlier. Moreover, using alternate but sound and permissable investment strategies, other than "risk free" programs could yield an individual insurer an actual 15-25% after tax return on equity.

Q Do you have any further comments?

A No

Q Thank you.

Q - What combined ratio yields an 11% return on equity?

A - Working backwards from an objective return on equity of 11% we can deduct the 6% return on raw capital leaving us a balance of 5% from insurance operations. Eliminating the 1.92 times leverage (5% ÷ 1.92) produces a required return from a single dollar of premium of 2.6%. This is a discounted figure. The gross undiscounted figure, which in our model would be the same as the terminal surplus in 1993, is approximately $5.9 million. Based on our model then the combined ratio necessary to produce this amount would be _____%.

APPENDIX I
BIOGRAPHY OF DONALD KRAMER

Donald Kramer is the Chairman of his own management consulting firm specializing in projects related to the insurance industry.

Business History

1. President, Kramer Capital Consultants, Inc.
   1975 - present

2. Partner,
   Oppenheimer & Co., Inc.
   1970 - 1975

3. Partner,
   First Manhattan Co.
   1962 - 1970

4. Research Manager
   Reiner, Linburn & Co.
   1961 - 1962

5. Security Analyst
   Bache & Co.
   1959-1961

6. Security Analyst
   Moody's Investors Service
   1958 - 1959

Date and Place of Birth

11/17/37 - Brooklyn, New York

Education

Bachelor of Arts in Economics: Brooklyn College, June 1958

Master's Degree in Business Administration:
New York University Graduate School of Business Administration
June 1964

Additional Background

President, Kramer Capital Consultants
Chairman, KCC Syndicate Managers, Inc.
Chairman, Heart of America Management Company
Vice Chairman, KCC Holding Corp.
Vice Chairman, First Southwest Life Insurance Co.
Initial Governor, New York Insurance Exchange
Director, Beneficial National Life Insurance Co.
Director, Leasco Corporation

- A study of insurer capital adequacy for the American Insurance Association

- Dealing with troubled insurers for the Michigan, Wisconsin, and New York State Insurance Bureaus

- A system for monitoring open competition for the Virginia Department of Insurance

- Construction of a financial planning model for several multiline property liability insurers.

- Competition and Anti-Trust for the United States Department of Justice

- Life insurance tax law reform for an ad hoc group of 12 leading life, property and liability companies

- A study of the life insurance industry for a major industrial company

- An appraisal of a major international insurance group

- The development of a new financial institution known as the New York Insurance Exchange

In addition, we have prepared several appraisals in the life and casualty fields; have helped raise capital for a successful intrastate airline; raised funds to acquire a domestic property and liability group; and supervised the formation of a new insurance company. We have also acted as financial advisor in the merger or acquisition of several companies in the life and casualty industries.

We have performed various services for the following organizations:

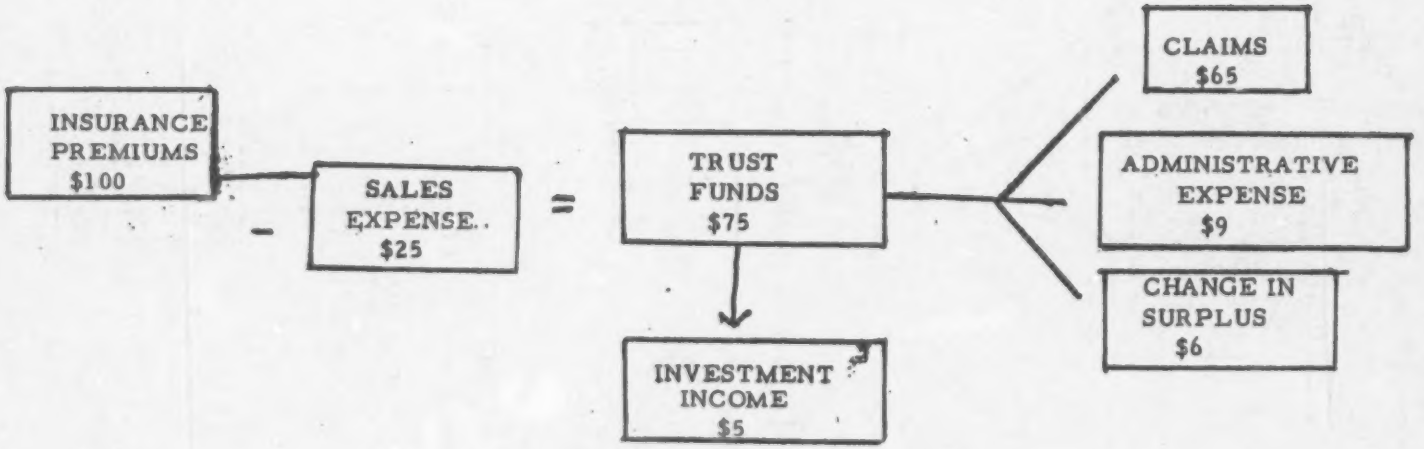
Aetna Life & Casualty Co.
Alexander & Alexander Inc.
American Express Co.
American Financial Corp.
American Insurance Association
American Plan Group
Beneficial Standard Corp.
CNA Financial/Loews Inc.
Consolidated Mutual Insurance Co.
Connecticut General Insurance

Crum & Forster Group
Douglas Dynamics Corp.
Empire Mutual Insurance Group
Equitable Life Holding Corp.
Ford Motor Credit Corp.
Government Employees Insurance Co.
Guardian Life Insurance Co.
Gulf United Corp.
Hartford Fire Insurance Co.
Home Insurance Co.
Ideal Mutual Insurance Co.
International Tel. & Tel.
Marsh & McLennan Companies Inc.
Massachusetts Automobile Rating Bureau
Metropolitan Life Insurance Co.
Michigan Insurance Bureau
Minnesota Department of Insurance
New Jersey Land Title Insurance Rating Bureau
New York Bank for Savings
New York State Insurance Department
Orion Capital Corp.
Oppenheimer & Co.
Reliance Group
Skadden Arps Slate Meagher & Flom
Southern Pacific Co.
Standard Oil Company (Indiana)
Statewide Insurance Co.
Strassburger & Price
Superior Court of New Jersey
Transport Insurance Co.
Travelers Corp.
Union Insurance Co.
Utica Fire Insurance Co.
Wisconsin Insurance Department

EXHIBIT A

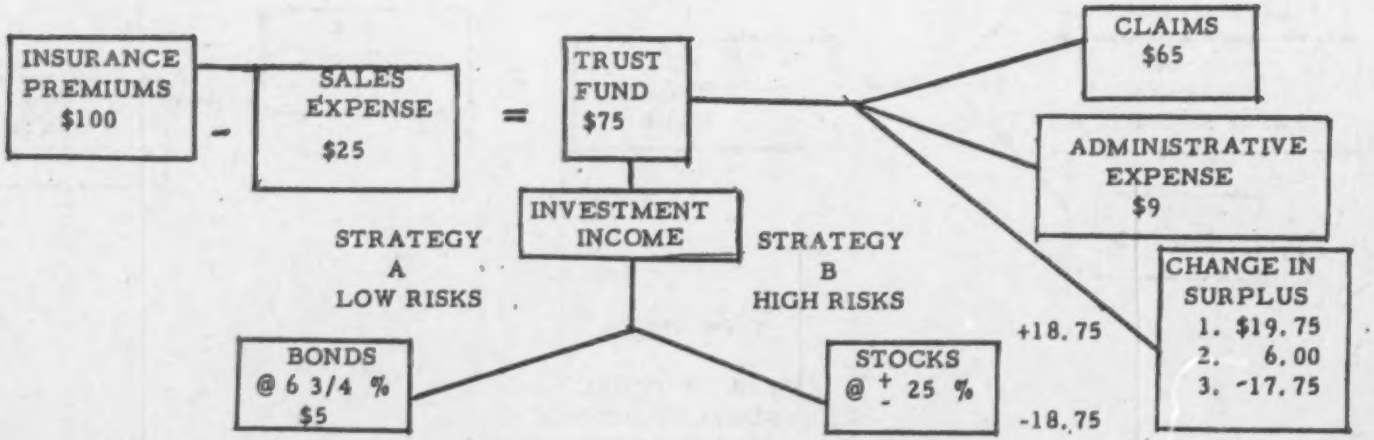
PROPERTY & LIABILITY INSURANCE
FINANCIAL MECHANICS
TOTAL COMPANY

CHART I



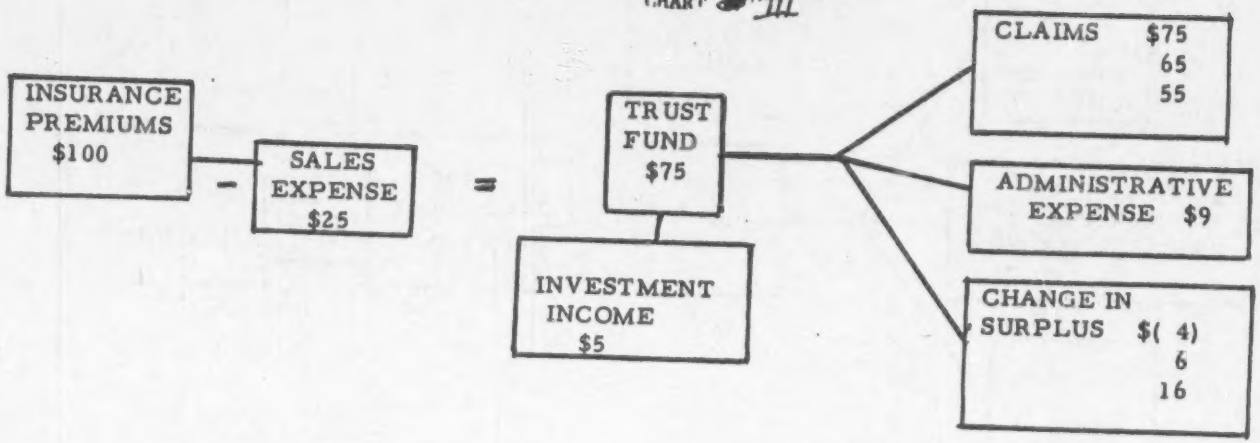
PROPERTY & LIABILITY INSURANCE
INVESTMENT RISK ELEMENTS
TOTAL COMPANY

CHART II



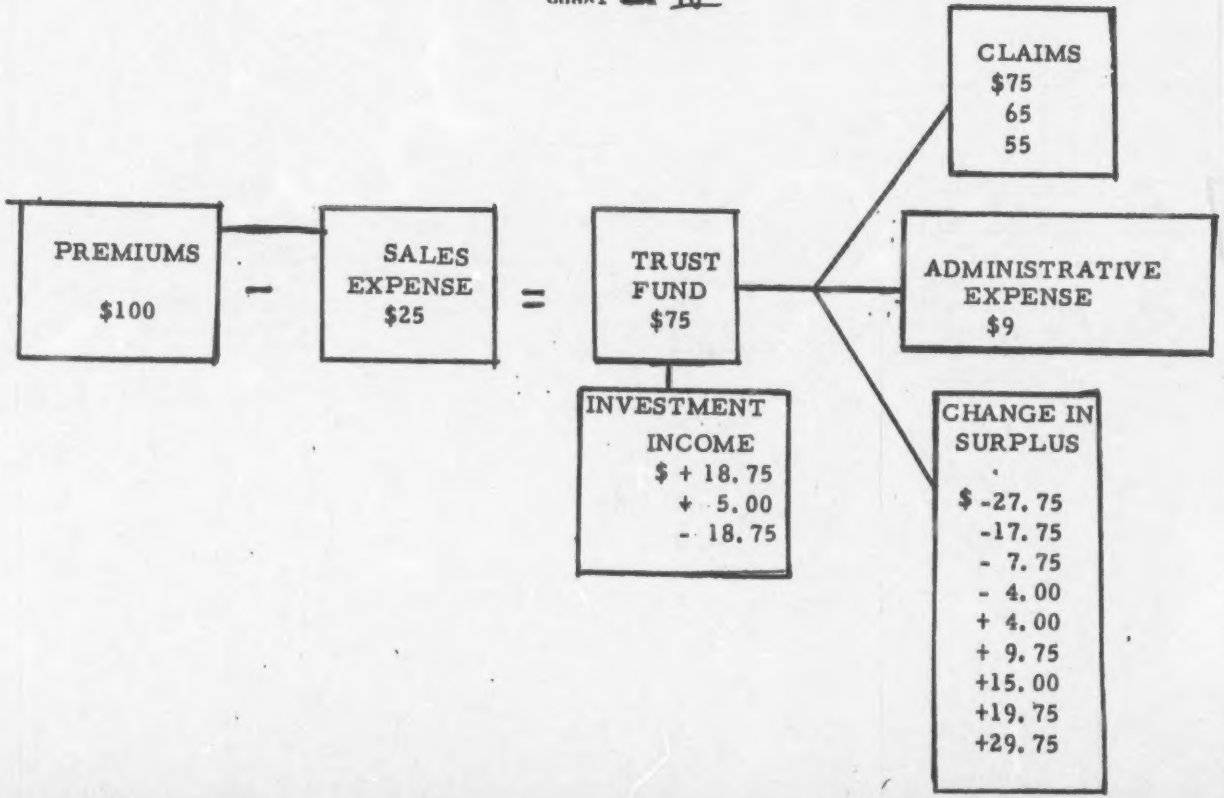
PROPERTY & LIABILITY INSURANCE
UNDERWRITING RISK ELEMENTS
TOTAL COMPANY

CHART III



PROPERTY & LIABILITY INSURANCE
COORDINATION OF RISK
TOTAL COMPANY

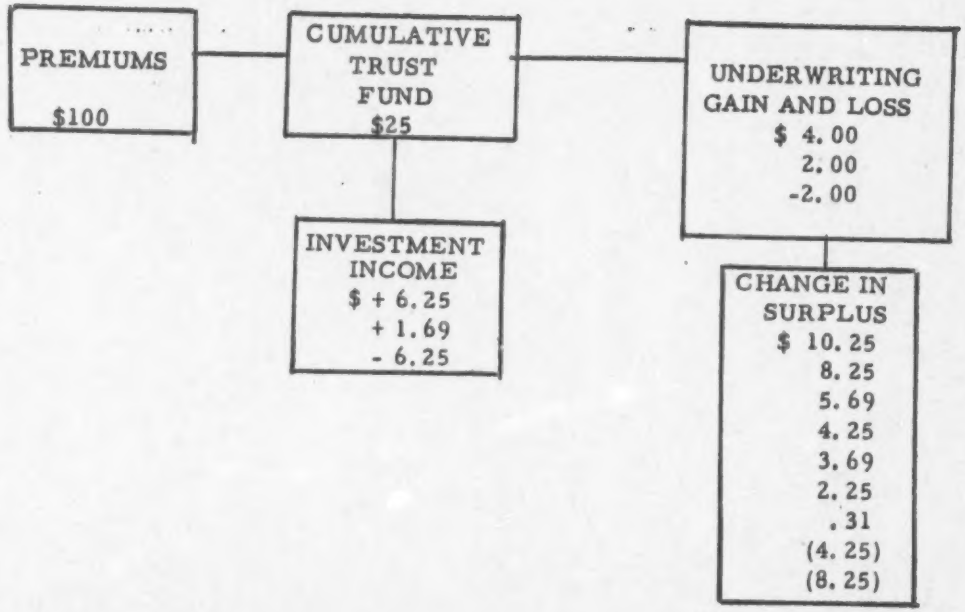
CHART IV



PROPERTY & LIABILITY INSURANCE
RISK CHARACTERISTICS BY LINE
TOTAL COMPANY

CHART VA

A. SHORT TAIL



93-031 O—82—17

Nancy A. Baerwaldt
Commissioner of Insurance
State of Michigan

Thank you for your invitation to report to this committee on developments in Michigan with regard to the workers' compensation insurance system. The business climate in Michigan, especially as it affects small businesses, has long been a concern of our state government. The cost of workers' compensation coverage has been identified as one of the major deterrents to attracting new businesses to the state.

To address the insurance aspect of the workers' compensation system, the Legislature held a series of hearings, beginning in the summer of 1980, to identify problem areas and possible solutions. In the fall of 1981 a legislative report was issued which recommended reforms in several areas. These included:

1. Abolish prior rate approval in favor of a file and use system, in anticipation that employer rate-shopping would encourage companies to maintain the lowest possible rates.

2. Eliminate cartel rate filing and drastically limit the insurance industry's ability to gather and disseminate collectively workers' compensation insurance pricing information.

3. Rationalize the rate classification system by eliminating redundant classifications and abolishing the single enterprise rule, which prohibits separate rating of the different operations of a business.

4. Provide a strong incentive for deregulated insurers to maintain a competitive market place by guaranteeing the reimposition of regulatory control over rates in the absence of workable competition.

5. Freeze or reduce workers' compensation insurance rates so as to reflect more accurately recent benefit reforms and the dramatic increase in recent years of investment income from unearned premium and loss reserves.

During the fall of 1981, three bills, HB 5036, HB 5162 and HB 5176, implementing the recommended reforms were introduced in the Legislature. HB 5036 became P.A. 204 of 1981 and went into effect January 1, 1982. The bill required that overall manual rate levels for workers' compensation insurance as of January 1, 1982 be reduced at least 20% from previous levels. The reduction was required to be based on three factors: decreasing loss ratios under the current rates, the rate effect of benefit reforms passed in 1980 to take effect January 1, 1982, and the consideration of investment income attributable to workers' compensation unearned premium and loss reserves. If insurers did not file such a reduction, the insurance commissioner was required to do so. Insurers were prohibited from charging a rate higher than the one filed in response to the law for any policy issued or renewed on or after January 1. This section of the law expires on January 1, 1983 when the competitive rating law goes into effect.

P.A. 204 also amended the rate evaluation standards for workers' compensation insurance to require explicitly the reflection of investment income in insurance rates. In response to this law the Workers' Compensation Rating and Inspection Association of Michigan (WCRIAM), which files rates on behalf of all workers' compensation insurers doing business in Michigan, amended its filing of October 30, 1981 from a 5.5% average decrease to a 22% average decrease applicable to all policies issued on or after January 1, 1982. The average decrease was distributed among the 3 industry groups and 409 classifications using relativities based on loss experience and classification average wages. Individual classification rate changes varied from a 12% increase to a 70% decrease. Thirty classes experienced increases; 379 experienced decreases.

Even had P.A. 204 not become law, the Michigan Insurance Bureau was prepared to administratively challenge the original 5.5% decrease as too small. The case would have challenged the reasonableness of the profit loading in the rates because it did not take into consideration investment income. On that basis, plus consideration of the rate effect of benefit reforms, the staff would have recommended a rate decrease at least as large as that filed in response to the legislation.

The open competitive rating bills, HB 5162 and 5176, passed the Legislature in February. These bills prohibit cartel rate filings, limit collective data gathering, remove prior rate approval and provide for the reimposition of regulation in the event competition is not sufficient to prevent excessive rates.

HB 5162 amends Chapter 24 of the Insurance Code to encourage lower workers' compensation insurance prices by mandating competitive pricing. Insurers will have to file rates based on their own expense loadings and their own predictions of future market conditions. Rates may be used by insurers as soon as they are filed, and will be considered to be in compliance with the statute unless disapproved by the commissioner after a hearing. Collection of a credible loss experience data base is provided for by creating a Data Collection Agency, whose governing board is appointed in part by the insurance commissioner and in part by the Governor, to designate an advisory organization to collect and compile historical loss data from all workers' compensation insurers. The advisory organization may also compute how this data would have been affected by subsequent significant law changes. The availability of aggregate loss data may enhance the competitive potential of smaller insurance companies which lack credible loss data of their own.

This bill gives insureds more direct access to company management representatives when they have unresolved questions about claim reserves or redemptions. Insurers are required to give their policyholders a yearly notice of their right to obtain rating, reserving and redemption information. Insureds have a right to a personal meeting with a management representative of the insurer and an informal appeal to the commissioner to resolve disputes. This will simplify the complaint process and eliminate the requirement for a formal hearing before the commissioner on every complaint.

This bill also amends the Uniform Trade Practices Act of the Insurance Code to prohibit insurers from employing certain unfair marketing practices. These include requiring renewal of an insurance policy in order to receive a dividend, making the purchase of workers' compensation insurance contingent on the purchase of another type of insurance and requiring a deposit premium of more than the greater of 25% or $2,500. Insurers must also perform payroll audits and pay dividends or other premium adjustments on a timely basis. The bill would take effect January 1, 1983.

H.B. 5176 amends the casualty rating chapter of the Insurance Code to rely on market forces, rather than prior rate approval by the insurance commissioner, to keep workers' compensation insurance rates from being excessive. As of January 1, 1983, all workers' compensation insurers will be able to use rates and rating plans as soon as they are filed with the commissioner. Section 2411 of this bill mandates rational, objective bases for risk classification. Each insurer will have to develop its own approach to risk classification and its own merit or experience rating plans.

The bill provides for the reimposition of one of several forms of regulatory control, if the Legislature agrees, should competition not exist in the workers' compensation insurance market. The bill would require the insurance commissioner to issue two annual reports and certifications, a tentative one in January and a final one in August, beginning in 1984, on the state of competition for workers' compensation insurance. Within 60 days after the issuance of the tentative report and certification, any person who disagrees with the commissioner's findings may request a contested case hearing. By August 1, the commissioner must issue a final report and certification about competition, and the Legislature must approve or disapprove the commissioner's certification within 90 days.

This bill also provides for a placement facility to guarantee that workers' compensation insurance coverage will be available to any person who can't buy it in the voluntary market. All workers' compensation insurers must participate in such a facility and must share in any losses it might have in proportion to their share of workers' compensation insurance premiums written in the voluntary market. The rates, rating plans, and classification plans of the faciltiy would be subject to the prior approval of the commissioner. The bill would take effect January 1, 1983.

I have included for your information copies of all the documents referenced in this statement. Thank you for this opportunity to present testimony.

INSURANCE BUREAU
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LANSING, MICHIGAN

REPORT OF THE JOINT SUBCOMMITTEE OF THE HOUSE LABOR AND INSURANCE COMMITTEES ON WORKERS' COMPENSATION INSURANCE

Introduction

Workers' compensation was established as an alternative to employer liability in the tort system; it is the sole remedy available to workers injured or disabled in the course of employment. The benefits are statutory, the rates are set by the filing of a rating agency on behalf of the insurers, and the claims appeals process is handled by a state bureau. Workers' compensation insurance is casualty insurance. It is subject to generally the same regulation as other casualty insurers. The Legislature has intervened in other casualty insurance markets, such as auto insurance (Essential Insurance) and medical malpractice insurance (the Brown-McNeely Fund).

Employers must provide coverage either by buying insurance or self-insuring under standards approved by the Labor Department. Since employers are required to have workers' compensation coverage and small employers are not allowed to be self-insured except through homogenous groups, insurance companies have a captive market.

Michigan insurance rates for workers' compensation are the highest in the country. While the reforms initiated by the Workers' Compensation Reform Act--adopted at the close of the 1979-80 legislative session--are indeed significant, the cost of workers' compensation insurance continues to be a source of concern as Michigan struggles to maintain a healthy business climate. A House Labor Subcommittee began examination of workers' compensation rates in 1980. In March 1981, Representative Matthew McNeely, Chair of the House Insurance Committee, and Representative Daisy Elliott, Chair of the House Labor Committee, asked Representative Mary C. Brown and Representative Juanita Watkins to co-chair a Joint Subcommittee on Workers' Compensation Insurance, charging them with reviewing issues relative to workers' compensation insurance ratemaking. Representatives Ciaramitaro, Emerson, Maynard, Hadden, Hillegonds and Varnum were appointed to serve on the subcommittee.

The Joint Subcommittee has continued the review, addressing the "insurance aspects" of workers' compensation to complement recent reforms in benefits. Specifically, the Joint Subcommittee was charged with the following:

1. review of the current ratemaking structure, to determine if competition exists in workers' compensation insurance rates;

2. examination of the State Accident Fund as a possible vehicle for implementation of a competitive rating system;

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3. review of the role of the Workers' Compensation Rating and Inspection Association of Michigan (WCRIAM) in the ratemaking procedure;

4. examination of self-insurance in Michigan, including the extent to which the trend toward self-insurance is affecting the workers' compensation marketplace, and the status of the self-insurers security fund;

5. review of the classification system, and its effect on rates;

6. examination of current procedures for informing employers how rates are determined, how classifications are appealed, and the differences between carriers on cost and service.

Using information gathered by the House Labor Subcommittee in the previous session, the Joint Subcommittee held a series of meetings from April through June 1981. Information was presented at the Joint Subcommittee meetings by the Insurance Bureau, the Workers' Compensation Bureau, insurance industry representatives, WCRIAM, and representatives of self-insurers including the timber industry. Employer representatives were present at all meetings and were involved in some subcommittee discussion.

Insurance Bureau

The Insurance Bureau, within the Department of Licensing and Regulation, has statutory responsibility for approving workers' compensation insurance classifications, rates and operating procedures. It also hears appeals on classifications, authorizes carriers to do business, licenses agents, reviews reserving procedures and oversees other operations of the carriers.

The Bureau relies heavily upon the insurance industry for data and interpretation for setting rates. Since 1977, the Bureau has challenged many aspects of the ratemaking methodology during rate cases, and has required the WCRIAM to report its review of methodologies. This effort has resulted in marginal improvements in ratemaking.

At times, the Bureau has requested analysis of investment income, medical cost-containment efforts, and other factors which affect rates. This effort has had little success for several reasons. First, the Bureau believes statutory authority for such action is limited and split between it and the Department of Labor. Second, the Bureau has not had sufficient resources—both in the quantity and expertise of personnel—available to thoroughly review rate filings. The Bureau estimates that a complete rate case would cost about $100,000, while duplicating the data base currently provided by the insurance industry would cost about $500,000.

Systemic problems of workers' compensation in Michigan—including high medical costs, absence of serious rehabilitation programs and redemption of almost all contested cases—have not been evaluated by the Insurance Bureau. Even though these factors significantly affect rates, they are not part of the ratemaking process. The Bureau has ventured little beyond its mandated responsibilities.

The Bureau does intervene on behalf of businesses with complaints about their workers' compensation premiums. In some cases, the Bureau is able to resolve complaints informally and provide information to employers. In other cases, the Commissioner acts as the ultimate determiner of proper rates, reserve levels, classifications and related matters. Bureau activity in resolving consumer complaints is also limited by lack of strong statutory authority as well as the split between it and the Department of Labor.

Workers' Compensation Bureau

The Bureau of Workers' Disability Compensation, within the Department of Labor, has general responsibility for administration of the Workers' Compensation Act. Among the functions relevant to the insurance system are adjudication of contested cases, approval of redemptions, review of promptness of payment, review of cessation of benefits by carriers, and oversight of rehabilitation services. Recordkeeping--including reports, payments records, status of claims--as well as other data are collected by the Bureau. These data are the basis of rate filings by the insurance industry.

Contested cases continue to take about a year to be heard by an administrative law judge. This delay in the appeals process places pressure on claimants to agree to redemption offers made by carriers. In contested cases over 99% of redemption agreements presented to administrative law judges are approved. In part, this is an institutional response to the adjudication caseload. Since redemptions are so automatically approved, some insurance carriers have offered redemptions in almost all cases. The carrier buys off the "nuisance" claims, removes their future liability, and passes the cost on to employers in the ratemaking process.

Very few resources are available to the Bureau, either in personnel or enforcement power, to effectively monitor insurance carriers in arbitrary stoppage of payment, to oversee rehabilitation, or to evaluate the medical costs of the system.

Approval by the Bureau is required if an employer wishes to become self-insured. With individual self-insurance, the largest employers are allowed to pay their liabilities as incurred without any security being required. Smaller individual self-insurers are required to provide security through aggregate and specific incident excess insurance policies. Self-insurers are required to pay an assessment to a Self-Insurers Security Fund to meet the liabilities of any self-insurers which might become insolvent. This fund is adequate, with its maximum 3% annual assessment, to meet the liabilities of only the smaller individual self-insureds.

Group self-insurance coverage is also regulated by the Labor Department. Reinsurance similar to that of the smaller individual self-insureds is required. The committee heard testimony that some groups enforce minimum safety standards, coupled with safety training and inspections.

The criteria for approval of both group and individual self-insured is vague. Two or three people in the Bureau are charged with approving and

reviewing the continuing self-insurance status of hundreds of employers. Little more than a superficial review of the employer's financial status is possible. No criteria exist regarding safety programs or rehabilitation efforts.

The continued approval of Chrysler for self-insurance, because there are no practical alternatives, suggests a flaw in the self-insurance system. The annual assessment is based on the previous year's losses, not on unfunded liabilities that may descend upon the fund in the future. Incidentally, Mr. Brakora stated this year's assessment is 1.4%, not 0.5%. The Self-Insurers Security Fund assessment is only 1.4% of paid claims. It meets only the liabilities of smaller self-insureds which must be reinsured. Chrysler's financial problem did not cause revocation of its self-insurance privilege under the Labor Department nor was it forced to provide security for its liabilities.

The financial attractiveness to employers of self-insurance is demonstrated by the dramatic increase in the number of employers who have been approved for this insurance privilege in the last five years:

Year*	Individual Self-Insured	Members of Self-Insured	Number of Self-Insured Groups
1976	355	289	3
1977	390	501	5
1978	459	797	6
1979	543	1,101	11
1980	636	1,715	18
1981 (August)	689	2,646	23

*End of year for all but 1981.

Testim-- · indicated employers were experiencing worker compensation cost reductions of 30%-40% when switching from insurance to self-insurance. Approximately 40%-45% of benefits ar paid by self- insureds.

Michigan State Accident Fund

The Michigan State Accident Fund is established under the Workers' Compensation Act. ~~It was created in the first workers' compensation law in 1912 to provide workers' compensation coverage for all employers~~. While sometimes believed to be still required to cover all employers, the Accident fund behaves like other insurance companies in accepting risks.

A state statute requires the Accident fund to handle compensation claims of state employees on a cost-plus basis. This revenue from the state contributes to the Fund's administrative expense. Despite its creation ~~as a state agency,~~ the Fund has resisted efforts to come under the administrative direction of the Insurance Commissioner. Its employees are in the state pension system, the Fund is exempt from federal taxes, and the Fund has been declared a state agency by the Attorney General. The governing board, which represents insureds excluding the state ~~and is appointed by the Governor,~~ has filed in federal court to resist the effort by the Insurance Commissioner to place it under her jurisdiction.

The Accident Fund provides a vehicle to establish an exclusive state fund or a competitive state fund which seriously tries to compete. If real cost competition cannot be developed among the insurance carriers, a restructured Fund can offer rates at a legislatively determined level.

Workers' Compensation Rating and Inspection Association of Michigan

Under the Insurance Code, all insurance carriers covering workers' compensation are allowed to make a joint rate filing. The Workers' Compensation Rating and Inspection Association of Michigan (WCRIAM) makes a single rate filing on behalf of workers' compensation carriers in the state. Since the 1978 rate was approved, less than ten deviations for single classifications were filed with the Commissioner. WCRIAM was first established in 1916, and it operated in a manner similar to ISO. It gathered data, published possible rates, but did not bind its members to abide by its rates. In 1934, the Insurance Commissioner ordered all insurers to use uniform rates and classifications, because of alleged destructive competition. The current version of WCRIAM evolved from that order, and now bears little resemblance to an ISO-type of licensed rating organization.

Though often perceived as a state agency, the Association is a private organization of insurance companies funded by an assessment on workers' compensation carriers. Several functions which might otherwise be done by a state agency are assumed by the Association, including handling of initial classification appeals, auditing of employer and insurance carrier records to assure that classifications are proper, that total payrolls are reported, and that other insurance requirements are met.

The rate filing by the Association is developed by the National Council on Compensation Insurance (NCCI) which is based in New York. While some minor changes may be made in the Michigan filing, almost all of the manual rates are developed by the National Council.

Very little effort has been made by the Association to inform employers directly of their rights or obligations in buying insurance. Employers generally do not know that they can appeal classifications. They are not made aware of any differences between carriers in terms or cost or services. In addition, WCRIAM administers the assigned risk plan.

Michigan Workers' Compensation Insurance Plan (Assigned Risk Plan)

About 15,000 or 6% of all Michigan employers are unable to obtain workers' compensation insurance in the voluntary market. Workers' compensation insurance is available to these employers through the Workers' Compensation Insurance Plan, administered by the Workers' Compensation Rating and Inspection Association of Michigan (WCRIAM).

Fifteen of the 250 workers' compensation carriers in Michigan act as servicing carriers for the plan. Since employers are not surcharged in the Workers' Compensation Insurance Plan, rates for the insurance are comparable to those in the voluntary market.

While the Joint Subcommittee did not hear any testimony citing severe problems with the operation of the plan, two areas of concern exist. First, the number of employers insured through the plan has increased from 7,500 in 1975 to 15,000 in 1981. This increase may be due in part to previously self-insured businesses seeking to become insured, which is the second area of concern. In most instances, self-insured businesses may seek insurance because of a reduction of operations (e.g., plant closing or layoffs). Such reductions have historically resulted in a significant increase in workers' compensation claims. Most Michigan carriers have been reluctant to assume the adverse risk associated with these businesses, which have been turning to the Workers' Compensation Insurance Plan for insurance.

In order to guarantee coverage for these businesses, the Insurance Bureau approved earlier this year a plan filed by WCRIAM on behalf of the assigned risk plan. Previously, self-insured businesses obtained insurance through the plan as any other business would, with two exceptions. First, employers formerly on self-insured plans are subject to a 10% surcharge. Second, former self-insureds with an estimated total standard premium of $5,000 or more must establish a "rating plan deposit" of 50% of the estimated annual premium. The purpose of the deposit is to guarantee payment of compensation claims. Since this plan has been in operation for a very short time, it is not yet possible to accurately assess its success. It is anticipated, however, that the plan will guarantee workers' compensation insurance for all businesses.

Ratemaking

Workers' compensation insurance rates in Michigan are noncompetitive. Currently, workers' compensation rates are approved by the Insurance Commissioner upon application by the insurers. Michigan law allows a rating organization to file on behalf of all insurers. When the Worker Compensation Rating and Inspection Association of Michigan (WCRIAM) files for an increase, the Commissioner may hold a full hearing or may approve the rate without a hearing. The Insurance Bureau estimates a cost of $100,000 for a rate hearing. As a result of the 1977 hearings, the rate increase was reduced 29.6% to 26.2%. As a result of the 1978 hearing, the requested increase was reduced from 21.3% to 14.3%.

After approval, a rate stays in effect until there is application for and approval of a rate change. No request for increased rates has been made since 1979.

Factors used in determining rates are loss experience, loss adjustment costs, administrative expenses including agent fees, statutory profit, and contingency. Expense allocations are a larger percentage of the premium actually paid by employers not eligible for experience modification than that percentage paid for expenses by larger employers. Therefore, the ratemaking system is essentially a cost-plus system. There is little incentive for safety programs and rehabilitation, particularly for small employers.

Loss experience includes actual payments and reserves for anticipated payments taken together. The two are not separated. Specific claim reserves not used become general reserves and are not figured in as part of future ratemaking if they have been reserved more than three years.

The law requires the use of Michigan experience in ratemaking but nationwide loss experience is allowed since the current classification system would not produce creditable statistics in many of the classes from Michigan data only. Loss data is supplied by the insurers to WCRIAM which in turn supplies it to NCCI which aggregates it nationwide and supplies that data to WCRIAM to sustain its filing for rates.

Michigan policy-year data for the past three years are used to update rates by dividing Michigan loss experience into three classifications (not the over-500 used in the manual). Those three broad classifications are manufacturing, contracting, and all other. Calendar-year experience statewide is used in comparison to previous calendar-year experience to determine the "trend." Calendar experience is different from the experience collected on a policy-year basis since calendar-year data include all payments made regardless of the calendar year to which the claim is charged.

Trending was an issue in the recent rate cases of the Insurance Bureau because it simply compounds the effects of changes in loss experience in the most recent year and projects them in a straight line into the future. Trending also may include the estimate of the cost effect of changes in the law.

Since the worker compensation rate is applied to an increasing payroll for the same job, inflationary factors influence the rate three times: in reserve updating, in trending, and in application of updated rates across a larger wage base.

The industry doesn't compete through manual rats, it "competes" through retrospective rating and dividend plans. These all entail premium refunds for a good safety record. However, these plans do not reduce upfront costs of premiums, often financed at high interest rates, nor do they reduce manual rates. There are some allegations that dividends are not promptly paid or that they are available only upon renewal with that company for another policy period.

Experience Modification

In 1979, about 30% of the employers paid premiums of over $750. For these employers, actual premium is determined by the manual rate modified by

the individual employer's experience. If an employer has greater loss experience (number and severity of injuries) than the average of the employers in that classification or group, the manual rate will be multiplied by a number larger than 1.00. If the employer has loss experience which is less than the average, the experience rating factor will be 1.00 or less. The frequency of incidents in relation to size of payroll is more significant in determining an employer's rate change than the cost of each incident. This is done to give more weight to the frequency of losses and to lessen the impact of one unusually large loss on an employer's premium. It is also based on the assumption that frequent accidents suggest an unsafe workplace and therefore greater future liability. Testimony indicated that rate changes to reflect good experience are very slow while rate changes to reflect poor experience are rapid enough that they are perceived as surcharges.

Experience rating is not available to very small employers because of the difficulty of establishing statistic creditability with such small figures. WCRIAM has proposed that the minimum premium necessary for experience rating be increased from $750 to $2,000. This proposal was rejected by the Insurance Bureau.

Classifications

Michigan employers are currently placed in one of about 525 classifications which are used to determine premiums for workers' compensation insurance. The classification system is one which Michigan employers have found cumbersome and difficult to understand.

While the system was originally developed to provide an accurate measure of a business's exposure to occupational hazard, many of Michigan's classifications lack sufficient credibility. Thus, events occurring in other states can and have had dramatic effects on Michigan workers' compensation insurance rates.

Michigan employers have several reasons for their dissatisfaction with the classification system. Many employers complain of being in a classification different from that of other businesses whose employees are performing the same type of work. Additionally, businesses are often classified according to the riskiest portion of their total operation, regardless of the percentage of their employees actually involved in that part of the operation. Confusion over the process of appealing classifications has also been of concern to employers.

Each classification has a separate rate. However, testimony indicated that some aspects of rate updating are based more on across-the-board experience of three broad categories than by specific classification.

Appeals of Classification

Appeals of classifcation are made to the WCRIAM staff. The next appeal is to the WCRIAM Board. An additional appeal is to the Insurance Commissioner. Eventually, court action can be taken.

Testimony indicated that employers do not know of the right to, or method of, appeal of their classifications. Many insurance agents were also unaware of the appeal process. During the past year the WCRIAM staff has made efforts to inform employers and agents of their appeal rights, but only if appeals were made to WCRIAM. Reduction in the number of classifications has been made, probably in response to increased displeasure with the existing system.

Reserves

Reserves are set for each anticipated loss at the time the claim is filed or the insurance company becomes aware of an incident likely to lead to a claim. Also, claim reserves are set aside in anticipation of claims based on previous expereince of claims filed against a policy year in future years. Needed reserves are estimated for each claim based on past experience for similar claims updated for economic changes. Realistically, all updating results in larger reserves. No offsetting calculations are made to reflect earnings on the investments of the reserves prior to payment to the injured worker.

Testimony indicated that reserves are usually too low because claims become more expensive as they "age." Benefits, once determined, are static. However, no consideration of the income from the investment of reserves is used. No one could indicate strong pressures within the system for setting reserves too low. There was the observation that too low reserves would result in a higher loss development factor. Several pressures exist to set the reserves too high. Income from reserves is the major source of profit for these insurance companies. The increase in reserves also means increase in capacity to write insurance. The fairness of rates is usually judged by the ratio of losses to premiums. Since most of the losses are actually reserves for losses, over-reserving may be used to make rates look fairer.

Testimony indicated no detailed analysis of loss development methodology. Such methodology was an issue in the 1978 rate filing. Any inherent incentive within the system seems to be to overrate the loss development factor to increase the rate, thus increasing profit.

Redemptions

Redeeming is the process of negotiating a workers' compensation settlement between the attorney for the worker and the attorney for the employer or the employer's insurance carrier. Most workers' compensation insurance contracts call for discretion on redemptions by the insurance company attorney up to a specific amount. For example, an insurance company may have the authority to settle claims for up to $5,000, without notice, without approval of or discussion with the employer.

Redemptions must be approved by an administrative law judge. Since the worker and employer are assumed to be represented by equal counsel, most redemptions are approved by the Bureau without a great deal of review. The 1980 Annual Report of the Bureau of Workers' Disability Compensation indicated that of 26,123 attempted redemptions, 25,976 were approved.

In cases tried to completion and in which a final order has been issued, plaintiff attorneys receive expenses plus 30% of the award after expenses have been deducted. In redemptions, plaintiff attorneys are awarded expenses plus a percentage of the agreed upon award (after expenses) based on the following:

--not more than 15% of the first $25,000;
--not more than 10% of any amount in excess of $25,000;
--not more than 20% of the award if the case has been tried to completion with proof closed but before a final order has been issued by the administrative law judge.

Alternatives

The Subcommittee heard a great deal of testimony and gathered extensive evidence concerning the ratemaking process. The fact that workers' disability compensation insurance premium rates are too high was uncontested. Therefore, the Subcommittee has recommended a drastic new approach to the ratemaking process in an effort to reduce the cost of workers' disability compensation in Michigan. Several alternatives to the proposal outlined in the section on Recommendations and Rationale were considered and rejected by the Subcommittee. Following is a discussion of those alternatives.

Regulation

The current system of ratemaking is at best quasi-regulatory. The Insurance Bureau has the authority to approve or disapprove rates submitted by the WCRIAM. However, it is dependent on data supplied by the insurance industry to determine those rates. A major portion of the rate is, obviously, loss experience statistics. The Bureau relies entirely (and without audit) on the statistical data collected by the National Council on Compensation Insurance (NCCI). This New York based association is totally industry controlled.

One method of bringing rates down would be for the Insurance Bureau to be charged with the responsibility of performing all of the functions necessary to determine a fair rate.

This method was rejected on the grounds that the cost to the state would be prohibitive. It is estimated that staff costs alone would add half a million dollars to the budget of the Insurance Bureau annually.

State-Funded System

This proposal would have the state cover the entire cost of workers' compensation out of the General Fund. Part of the additional $1.2 billion cost to the General Fund would be raised through an increase in the Single Business Tax. The rest would come through program reductions and individual tax increases. At initial blush the system would be the most attractive from an employer point of view and would appear to greatly enhance

Michigan's ability to attract and hold business. However, it would greatly reduce business incentive to maintain safe working conditions and would provide no incentive for reducing costs through improvements in quality of work life or in preventing spurious claims.

Any cost to the General Fund would be difficult to absorb at this time. Legislative approval of increases in the Single Business Tax or personal taxes would be difficult at this time.

Excess Profits Regulation

Another alternative is to regulate excess insurance company profits. Both Florida and New York have newly passed excess profits legislation, and other states are investigating this alternative. Basically, excess profits regulation, as part of the rate filing, would establish "target" loss ratios, administrative expense ratios and factors for profit. Any profit in excess of that approved in the rate filing would result in an automatic rate decrease. Investment income as well as other sources of income would be included in excess profits regulation.

Recommendations and Rationale

The Subcommittee recommends a new system designed to encourage a reduction in rates through competition in the marketplace.

A strong incentive to encourage competition within the insurance industry is necessary to insure success of the overall plan.

The following five-point plan is recommended:

1. File and Use Rates

The current system of quasi-regulated ratemaking would be replaced with a deregulated free market determination. Insurers will be free to lower rates to attract business. Employers will be free to shop for the lowest rate available. It is anticipated that employer rate-shopping will encourage insurance companies to maintain the lowest rates possible.

2. Data-Gathering Function of the WCRIAM

Democratic subcommittee members recommend that the data-gathering function of the WCRIAM be eliminated to prevent price-fixing in the deregulated insurance industry. At the same time, legislation should be adopted to prevent any sharing of information among insurers. Rates would be based on the experiences of each individual insurance company. Republican members believe that WCRIAM or a successor agency should still collect data. If pure premium data, coupled with loss frequency and severity data, is not available, there will not be many insurers competing in the market. Republicans recommend that WCRIAM not be allowed to make rate-filings, nor publish premium data with administrative expense loadings. There are few, if any, insurers with sufficient data to construct actuarially sound rates. The Insurance Code requires rates to be

actuarially sound. Companies, such as AETNA and Travelers, want to compete vigorously on pricing, but also insist that indicated pure prmium data be available.

3. Limit Classifications

Over the years a system has evolved to classify and group together employers with similar risk of workers' compensation claims. The approximately 500 classifications now used were developed in part by pressure from certain types of employers and are undecipherable to the average employer. A simpler system would be required if rates are to be determined by companies separately. No company would have enough Michigan business to divide it 500 ways and have the classification meaningful.

Use of the "single enterprise rule" in classification has added to employer dissatisfaction with the system. The rule essentially requires that insureds be assigned the classification which most accurately reflects the risk of the entire business, rather than providing separate classification for employees in separate operations. Application of the rule often results in entire businesses being classified in the classification of their riskiest operation, regardless of the percentage of employees involved in that operation. The single enterprise rule should be abolished. Democrats recommend that up to 20 categories be allowed under the new competitive system since a single rate would be unfair to low-risk employers. Insurers could compete by use of their own classification system.

Republicans suggest starting with three classifications, such as manufacturing, contracting, and all other. From these three general classes, ascertainable rating factors related to risk could be applied. These rating factors would be spelled out in statute, and include things like the employer's safety record. Such an initial approach might make the industry come forth with an analysis of reasonable rating factors related to risk.

4. Industry Incentive to Maintain a Competitive Marketplace

In the past, most efforts to keep rates down have failed to work. Therefore, the Democratic Subcommittee members recommend that a strong incentive be placed on the insurance industry to maintain and enhance the competitive nature of the industry.

To do this, Democrats recommend that the Insurance Commissioner be required to issue an annual certification of the absence or presence of competition in the marketplace. In making the determination, the Commissioner would be instructed to consider a number of factors including:

—the extent to which any one company controlled the market;
—the total number of companies writing workers' compensation in the state;
—the disparity among workers' compensation insurance rates in the state as filed under the file and use system;
—the availability of workers' compensation insurance to employers in all areas and types of business; and
—residual market share.

The certification would be forwarded to the following:

Members of the House Insurance Committee
Members of the Senate Commerce Committee
Members of the House Labor Committee
Members of the Senate Labor Committee
The Clerk of the House
The Secretary of the Senate
The Governor

This certification would be subject to reversal by concurrent resolution within 90 days.

Upon a showing of a lack of competition in the marketplace, an exclusive state fund would be automatically triggered. The composition, method of implementation, etc., for the operation of the fund should be included in the statute and its provisions made automatic upon the determination of a non-competitive market.

Republicans are cautious about any exclusive state fund. True, it is popular in Ohio, but it has existed there over sixty years. The Democrats' concept of an automatic trigger might scare away foreign insurers who would be competitive on price. It is premature to talk about an exclusive state fund, pending detailed study of the experience of other states, including any state money used in those systems. It is the Republicans' position that the report should not recommend a possible exclusive state fund.

5. Ceiling on Rates (Based on Total Collections)

In order to adjust to the dramatic changes in the workers' compensation insurance system proposed, the Democratic Subcommittee members recommend that the system be given an effective date two years after adoption. During the interim, the Subcommittee recommends that rates be capped at their current levels.

The latest rate filing anticipated a 74% loss ratio. In 1979 and 1980 the loss ratio was 60%. This means 40% of premium goes for expenses, profit and overall reserves. This figure does not include investment income which has increased dramatically in recent years.

Current insurance industry profit margins and major revisions in the workers' compensation law adopted by the Legislature at the end of the last term indicate a justification for substantial reductions in workers' compensation insurance premiums in the near future. Republicans believe any state-mandated rate freeze or cut should only operate in a transition period to a competitive market. If coordination of benefits and a new definition of disability are adopted this fall, effective on January 1, Republicans envision a substantial reduction during a transition period, based on projected cost savings, and frontloading of dividend and retrospective rating plans.

6. Residual Market

When insurance is sold competitively, availability often becomes a problem. As workers' compensation coverage is mandated by law, we do not want employers put out of business because they cannot obtain coverage. Any competitive rating scheme must mandate an assigned risk plan, rather than the voluntary plan which now exists.

Additional Recommendations

The Subcommittee heard many complaints from employers about unfair practices of certain insurers. Many employers are confused by the intracacies of the workers' compensation insurance system.

The Subcommittee recommends that the "fair trade practice standards" established in Chapter 20 of the Insurance Code be expanded to be more relevant to workers' compensation insurance. Chapter 20 protections should be expanded to include prompt payment of dividends. Business should have a right to request a payroll audit when the employer believes an insurer has overestimated annual premium. Insurers should be prohibited from requiring businesses to purchase other types of insurance as a condition of obtaining workers' compensation insurance. Insurance policies should include a detailed notice of the rights of employers to contest their rates or classifications.

Merit rating plans should be filed for employers with premiums under $750 per year. Notice should be given to employers before claims are redeemed by carriers. Employers should have appeal rights to the Insurance Commissioner on reserves on a given claim.

Republican Subcommittee members favor the authorization of medical deductibles in workers' compensation policies. Democratic members believe that this concept needs further study.

Finally, the Subcommittee recommends additional study of methods to encourage rehabilitation of injured workers and efforts to contain medical costs.

254JM:as/js
September 24, 1981

STATE OF MICHIGAN

81ST LEGISLATURE

REGULAR SESSION OF 1982

Introduced by Reps. Ciaramitaro, Elliott, Mary C. Brown, Emerson, Watkins, Vanek and McNeely

ENROLLED HOUSE BILL No. 5162

AN ACT to amend sections 2403, 2406, 2431, and 2436 of Act No. 218 of the Public Acts of 1956, entitled as amended "An act to revise, consolidate, and classify the laws relating to the insurance and surety business; to regulate the incorporation or formation of domestic insurance and surety companies and associations and the admission of foreign and alien companies and associations; to provide their rights, powers, and immunities and to prescribe the conditions on which companies and associations organized, existing, or authorized under this act may exercise their powers; to provide the rights, powers, and immunities and to prescribe the conditions on which other persons, firms, corporations, and associations engaged in an insurance or surety business may exercise their powers; to provide for the imposition of a privilege fee on domestic insurance companies and associations and the state accident fund; to provide for the imposition of a tax on the business of foreign and alien companies and associations; to provide for the imposition of a tax on the business of surplus line agents; to modify tort liability arising out of certain accidents; to provide for limited actions with respect to that modified tort liability, and to prescribe certain procedures for maintaining those actions; to require security for losses arising out of certain accidents; to provide for the continued availability and affordability of automobile insurance and homeowners insurance in this state, and to facilitate the purchase of that insurance by all residents of this state at fair and reasonable rates; to provide for certain reporting with respect to insurance, and to prescribe duties for certain state departments and officers with respect to that reporting; to establish and continue a nonprofit malpractice insurance fund to provide malpractice insurance to health providers; to modify and clarify the status, rights, powers, duties, and operations of the nonprofit malpractice insurance fund; to provide for the departmental supervision and regulation of the insurance and surety business within this state; to provide for the conservation, rehabilitation, or liquidation of unsound or insolvent insurers; to provide for the protection of policyholders and claimants of unsound or insolvent insurers; and to provide penalties for the violation of this act," section 2403 as amended by Act No. 204 of the Public Acts of 1981, being sections 500.2403, 500.2406, 500.2431, and 500.2436 of the Compiled Laws of 1970; and to add sections 2008, 2016, 2021, 2235, 2402, 2407, 2419, 2421, and 2475.

The People of the State of Michigan enact:

Section 1. Sections 2403, 2406, 2431, and 2436 of Act No. 218 of the Public Acts of 1956, section 2403 as amended by Act No. 204 of the Public Acts of 1981, being sections 500.2403, 500.2406, 500.2431, and 500.2436 of the Compiled Laws of 1970, are amended and sections 2008, 2016, 2021, 2235, 2402, 2407, 2419, 2421, and 2475 are added to read as follows:

Sec. 2008. (1) Upon the written request of an insured, an insurer shall audit or cause to be audited an insured's payroll expenditures for the purpose of determining the proper worker's compensation insurance premiums. The written request of the insured shall include a statement that the insured has reason to believe

that there has been not less than a 20% change in payroll expenditures and the reasons for that belief. The audit shall be completed within 120 days of the receipt of the written request, if all required information to complete the audit has been made available. Only 1 audit per calendar year conducted at the request of the insured is required under this subsection.

(2) Except for a final audit, it is an unfair or deceptive act or practice in the business of insurance for an insurer to fail to complete a payroll audit which is required pursuant to the terms of a policy within 120 days after the date specified in the policy for the commencement of an audit, if all required information to complete the audit has been made available. It is an unfair or deceptive act or practice in the business of insurance if a final audit is not completed by an insurer within 120 days after the date of termination of the policy, if all required information to complete the audit has been made available.

(3) An insurer shall pay on a timely basis to its insured any adjustment in a premium, any dividend, a retrospective premium adjustment, or any similar amount which is due. It is an unfair or deceptive act or practice in the business of insurance for an insurer to not pay these amounts on a timely basis. As used in this section, "timely basis" means the following, as applicable:

(a) If the amount is due pursuant to a payroll audit, within 60 days after the completion of that audit.

(b) If the policy specifies a date on which an amount is due, on or before that date.

(c) If the date the amount is due is not specified in the policy, within 60 days after the expiration of the policy.

(d) In the case of a retrospective premium adjustment, as specified in the policy, or 9 months after expiration of the policy.

(e) In the case of a dividend, within 60 days after determination of the specific amount due.

(4) When an adjustment in a premium, a dividend, a retrospective premium adjustment, or a similar amount due an insured is not paid on a timely basis, the amount due shall bear simple interest from the applicable date specified in subsection (3) at the rate of 12% per annum. This interest shall be paid in addition to and at the time of payment of the amount due.

(5) This section only applies to worker's compensation insurance.

Sec. 2016. (1) In addition to other provisions of law, the following practices as applied to worker's compensation insurance are defined as unfair methods of competition and unfair and deceptive acts or practices in the business of insurance:

(a) As a condition of receiving a dividend for the current or a previous year, requiring an insured to renew or maintain worker's compensation insurance with the insurer beyond the current policy's expiration date.

(b) As a condition of obtaining worker's compensation insurance, requiring a premium deposit greater than 25% of the total projected annual premium or $2,500.00, whichever is greater.

(c) As a condition of obtaining worker's compensation insurance, requiring the purchase of any other form of insurance from the same insurer.

(d) As the result of a payroll audit or examination, requiring the payment of an increased premium increment within 30 days of written notification of the increase in premium.

(2) This section shall not apply if the insured was guilty of misrepresentation, fraud, or other acts of bad faith.

Sec. 2021. An unfair method of competition and an unfair or deceptive act or practice in the business of insurance includes failure by a rating organization and an insurer which makes its own rates, within a reasonable time after receiving written request therefor and upon payment of such reasonable charge as it may make, to furnish to any insured affected by a rate made by it, or to the authorized representative of such insured, all pertinent information to such rate.

Sec. 2235. At least annually, in conjunction with a renewal notice, a bill, or other notice of payment due issued in connection with a policy of worker's compensation insurance, an insurer shall send to each insured a written notice containing all of the following statements:

(a) A description of the insured's right to all pertinent rating information within a reasonable time after making a written request and paying reasonable charges.

(b) A description of the procedures whereby an insured or an insured's representatives may request a review of the way in which the insured's rates and premiums have been determined, including a statement of the insured's right to appeal the result of the review to the commissioner.

(c) Relevant information regarding the right of an insured to obtain a payroll audit under section 2008.

(d) Relevant information regarding the right of an insured to request a conference with a management representative to review reserve or redemption decisions by the insurer under section 2419.

Sec. 2402. (1) As used in this act with respect to worker's compensation insurance:

(a) "Data collection agency" means an agency established for the purpose of effectuating the worker's compensation data requirements of this chapter.

(b) "Designated advisory organization" means the advisory organization designated by the data collection agency pursuant to section 2407(2).

(c) "Insurer" includes the state accident fund.

(d) "Rate" means the cost of insurance per payroll before adjustment for an individual insured's size, exposure, or loss experience.

(e) "Rating system" means every classification, rating plan, merit rating plan, rating values, and manual, containing the rules used by an insurer in the determination of premiums.

(2) There is created a data collection agency for the purpose of effectuating the worker's compensation data requirements of this chapter. The governing board of the data collection agency shall include all of the following:

(a) Three persons who represent private insurers in this state.

(b) One person who represents the general public.

(c) One person who represents employers in this state.

(d) One person who represents the executive branch of state government.

(e) One person who is an insurance agent.

(f) The commissioner of insurance.

(3) A member of the governing board of the data collection agency shall serve for a term of 1 year.

(4) The members specified in subsection (2)(b), (c), and (e) shall be appointed by the commissioner. The member specified in subsection (2)(d) shall be appointed by the governor with the advice and consent of the senate. The members specified in subsection (2)(a) shall be appointed by the commissioner from recommendations made by the insurance industry in this state and shall be generally representative of small, medium, and large insurers.

(5) Business of the governing board of the data collection agency shall be conducted at a public meeting pursuant to Act No. 267 of the Public Acts of 1976, as amended, being sections 15.261 to 15.275 of the Michigan Compiled Laws. Notice of the date, time, and place of a public meeting of the governing body shall be as prescribed in Act No. 267 of the Public Acts of 1976, as amended.

Sec. 2403. (1) All rates shall be made in accordance with this section and all of the following:

(a) Due consideration shall be given to past and prospective loss experience within and outside this state; to catastrophe hazards; to a reasonable margin for underwriting profit and contingencies; to dividends, savings, or unabsorbed premium deposits allowed or returned by insurers to their policyholders, members, or subscribers; to past and prospective expenses, both countrywide and those specially applicable to this state; to underwriting practice, judgment, and to all other relevant factors within and outside this state. With respect to worker's compensation insurance, in determining the reasonableness of the margin for underwriting profit and contingencies, consideration shall be given to all after-tax investment profit or loss from unearned premium and loss reserves attributable to worker's compensation insurance, as well as the factors used to determine the amount of reserves. With respect to all other kinds of insurance to which this chapter applies, all factors to which due consideration is given under this subdivision shall be treated in a manner consistent with the laws of this state which existed on December 28, 1981.

(b) The systems of expense provisions included in the rates for use by any insurer or group of insurers may differ from those of other insurers or groups of insurers to reflect the requirements of the operating methods of the insurer or group with respect to any kind of insurance, or with respect to any subdivision or combination thereof for which subdivision or combination separate expense provisions are applicable.

(c) Risks may be grouped by classifications for the establishment of rates and minimum premiums. Classification rates may be modified to produce rates for individual risks in accordance with rating plans which measure variations in hazards, expense provisions, or both. The rating plans may measure any differences among risks that may have a probable effect upon losses or expenses as provided for in subdivision (a).

(d) Rates shall not be excessive, inadequate, or unfairly discriminatory. A rate shall not be held to be excessive unless the rate is unreasonably high for the insurance coverage provided and a reasonable degree

of competition does not exist with respect to the classification, kind, or type of risks to which the rate is applicable. A rate shall not be held to be inadequate unless the rate is unreasonably low for the insurance coverage provided and the continued use of the rate endangers the solvency of the insurer; or unless the rate is unreasonably low for the insurance provided and the use of the rate has or will have the effect of destroying competition among insurers, creating a monopoly, or causing a kind of insurance to be unavailable to a significant number of applicants who are in good faith entitled to procure the insurance through ordinary methods. A rate for a coverage is unfairly discriminatory in relation to another rate for the same coverage, if the differential between the rates is not reasonably justified by differences in losses, expenses, or both, or by differences in the uncertainty of loss for the individuals or risks to which the rates apply. A reasonable justification shall be supported by a reasonable classification system; by sound actuarial principles when applicable; and by actual and credible loss and expense statistics or, in the case of new coverages and classifications, by reasonably anticipated loss and expense experience. A rate is not unfairly discriminatory because the rate reflects differences in expenses for individuals or risks with similar anticipated losses, or because the rate reflects differences in losses for individuals or risks with similar expenses. Rates are not unfairly discriminatory if they are averaged broadly among persons insured on a group, franchise, blanket policy, or similar basis.

(2) Except to the extent necessary to meet the provisions of subsection (1)(d), uniformity among insurers in any matters within the scope of this section is neither required nor prohibited.

(3) A rate filing by a rating organization licensed under section 2436 to file rates for worker's compensation insurance shall not be effective after December 31, 1981 unless the overall manual rate level is reduced at least 20% from the overall manual rate level effective in calendar year 1981. Such reduction shall reflect favorable experience under the current rates, the rate effect of law amendments to Act No. 317 of the Public Acts of 1969, as amended, adopted in Act No. 357 of the Public Acts of 1980, and the consideration of investment income attributable to worker's compensation insurance premiums. If no rate filing is effective after December 31, 1981, the insurance commissioner shall immediately promulgate rates whose overall manual rate level is reduced at least 20% from the overall manual rate level effective in calendar year 1981. The commissioner's determination shall consider any proposed rates filed for 1982 by a rating organization licensed under section 2436 to file rates for worker's compensation insurance and adjust those rates to comply with this subsection. Said determination shall not require notice or a hearing prior to its effective date.

As used in this subsection, "overall manual rate level" means the projected total amount of money to be generated by the application of manual rates per $100.00 of payroll on file with the insurance commissioner, exclusive of any rating system adjustments including, but not limited to, minimum premiums, loss constants, experience or retrospective rating plans, or dividend plans.

This subsection shall expire January 1, 1983.

(4) An insurer licensed to write worker's compensation insurance in this state shall not use a rate for worker's compensation insurance higher than the rate developed pursuant to subsection (3) on any policy issued or renewed by an insurer or its agents after December 31, 1981. This subsection shall expire January 1, 1983.

(5) Subsections (3) and (4) shall not be interpreted to include any employer or group of employers authorized to carry their own worker's compensation risk as a self-insurer under Act No. 317 of the Public Acts of 1969, as amended, being sections 418.101 to 418.941 of the Michigan Compiled Laws.

Sec. 2406. (1) Except in regard to worker's compensation insurance, every insurer shall file with the commissioner every manual of classification, every manual of rules and rates, every rating plan, and every modification of any of the foregoing which it proposes to use. Every such filing shall state the proposed effective date thereof, and shall indicate the character and extent of the coverage contemplated. When a filing is not accompanied by the information upon which the insurer supports such filing, and the commissioner does not have sufficient information to determine whether such filing meets the requirements of this chapter, the commissioner shall within 10 days of such filing give written notice to such insurer to furnish the information upon which it supports such filing. The information furnished in support of a filing may include (a) the experience or judgment of the insurer or rating organization making the filing, (b) its interpretation of any statistical data it relies upon, (c) the experience of other insurers or rating organizations, or (d) any other relevant factors. A filing and any supporting information shall be open to public inspection after the filing becomes effective.

(2) Except in regard to worker's compensation insurance, an insurer may satisfy its obligation to make such filings by becoming a member of, or a subscriber to, a licensed rating organization which makes such filings, and by filing with the commissioner a copy of its authorization of the rating organization to make such filings on its behalf. Nothing contained in this chapter shall be construed as requiring any insurer to become a member of or a subscriber to any rating organization.

(3) Every insurer with regard to worker's compensation insurance in this state shall file with the commissioner all rates and rating systems. Every insurer that insures worker's compensation in this state on the effective date of this subsection shall file the rates not later than the effective date of this subsection.

(4) Except as provided in subsection (3), the rates and rating systems regarding worker's compensation insurance shall be filed not later than the date the rates and rating systems are to be effective. These filings shall be considered to meet the requirements of this chapter unless and until the commissioner disapproves a filing pursuant to section 2418.

(5) Each filing under subsections (3) and (4) shall be accompanied by a certification by the insurer that, to the best of its information and belief, the filing conforms to the requirements of this chapter.

Sec. 2407. (1) As used in this section, "pure premium data" means all historical data, including actual historical loss data by classification per payroll, except data prohibited by subsection (4). Pursuant to this section, insurers shall supply information regarding pure premium data to the designated advisory organization.

(2) With respect to worker's compensation insurance:

(a) The data collection agency shall designate 1 advisory organization for the purpose of collecting historical data from all insurers and compiling pure premium data pursuant to the statistical plans of the designated advisory organization approved by the commissioner. All insurers shall make reports which conform to the data reporting requirements of the approved statistical plans of the designated advisory organization.

(b) The designated advisory organization shall make and file rates, rating systems and policy forms for the residual market in accordance with chapter 23.

(c) The data collection agency shall establish a plan providing for the collection of data, in addition to pure premium data, by the designated advisory organization to the extent necessary to establish proper residual market rates. The plan established pursuant to this subdivision shall be submitted to the commissioner for approval or amendment.

(d) The data collection agency shall authorize the designated advisory organization to compute how pure premium data which has been previously collected would have been affected by any significant change in a law resulting from a subsequent statute or subsequent court decision, if the change in the law were in effect before the pure premium data had been collected. The designated advisory organization shall determine the effect such a law change would have had in a manner which reasonably reflects the law change. The determination shall be disseminated only after approval or amendment by the commissioner. The commissioner shall approve, reject, or amend the determination to reasonably reflect the effects of the law change within 30 days after the determination is submitted to the commissioner. If the commissioner fails to approve, reject, or amend the determination with the 30 days, the determination shall be deemed approved.

(e) The designated advisory organization shall distribute to the data collection agency pure premium data for dissemination to all insurers.

(f) The designated advisory organization shall not:

(*i*) Collect any information other than historical data, except data collected pursuant to subdivisions (c) and (d).

(*ii*) Disseminate any data except as provided in this subsection.

(3) The data collection agency shall make available to insurers the information reported under subsection (2), except information necessary to operate the residual market.

(4) Neither the designated advisory organization nor the data collection agency shall collect, compile, or make available to insurers any information regarding the following except as provided in subsection (2)(b) to (d):

(a) Actuarial projections or trending factors.

(b) Profits.

(c) Expenses, except loss adjustment expenses.

(5) An insurer filing a rating system incompatible with the approved statistical plans shall file with the commissioner the proposed plan for reporting data which will conform with the data reporting requirements of the statistical plans approved by the commissioner and simultaneously furnish a copy of the filing with the data collection agency and the designated advisory organization. The data collection agency may request a hearing on any proposed plan for reporting data to determine if the plan will be compatible with the approved statistical plans. A request for a hearing under this subsection shall be made by first class mail, return receipt requested. The commissioner shall hold a hearing pursuant to Act No. 306 of the Public Acts

of 1969, as amended, being sections 24.201 to 24.315 of the Michigan Compiled Laws, on a proposed plan not later than 30 days after receipt of the request for a hearing. At the hearing, consideration shall be given to the compatibility of the proposed plan with the data reporting requirements of the approved statistical plans of the data collection agency and the filer's practical capability of complying with those requirements. The commissioner shall issue a final order as to the compatibility of the proposed rating system and the capability of the filer within 30 days of the hearing. Unless the commissioner finds that the proposed system is compatible and the filer has the capability, the filer shall not use the proposed system but shall, at its option, use its prior rating system or file a new rating system.

(6) Except as provided in this section, insurers shall not share information in establishing rates or rating systems. A person, insurer, or organization that violates this subsection is subject to the penalties provided in section 2478. This subsection shall not prohibit an insurer from obtaining or utilizing information which is a matter of public record.

(7) The reasonable cost of the operation of the data collection agency shall be borne by the designated advisory organization.

(8) The commissioner shall promulgate rules pursuant to Act No. 306 of the Public Acts of 1969, as amended, being sections 24.201 to 24.315 of the Michigan Compiled Laws, for the purpose of establishing reporting periods and the method of reporting the information and data provided for under this section.

(9) This section only applies to and for the purposes of worker's compensation insurance.

Sec. 2419. (1) An insured who has reason to believe that the insured's premium charges for worker's compensation insurance are excessive as a result of unreasonable reserves or the unreasonable redemption of a claim shall be entitled to a personal meeting with a management representative of the insurer.

(2) Upon receipt of a written request by the insured, the insurer shall provide within 30 days of the receipt of the request reserve and redemption information with regard to worker's compensation insurance which is pertinent to the premiums charged for that insurance.

(3) If a meeting between the insured and the management representative of the insurer under subsection (1) fails to resolve the dispute, the insured shall be entitled to a determination of the dispute by the commissioner. The commissioner shall promulgate rules pursuant to Act No. 306 of the Public Acts of 1969, as amended, being sections 24.201 to 24.315 of the Michigan Compiled Laws, establishing procedures for a determination under this subsection. The procedures shall provide for determinations to be made on a timely and informal basis.

(4) Upon written request of an insured, an insurer shall not redeem a worker's compensation claim without giving 10 business days' prior notice to the insured by first class mail, return receipt requested.

Sec. 2421. As a condition of maintaining its certificate of authority, an insurer authorized to write worker's compensation insurance shall not do any of the following:

(a) Be a member of a rating organization in this state for worker's compensation insurance or have any rates, rules, or forms filed on its behalf with regard to worker's compensation insurance in this state by a rating organization.

(b) Except as necessary to operate the residual market under chapter 23, agree with any other insurer or with an advisory organization to adhere to or use any rate, rating plan, rating schedule, rating rule, or underwriting rule with regard to worker's compensation insurance in this state.

(c) Make any agreement with any other insurer, advisory organization, or any other person which has the purpose or effect of restraining trade or of substantially lessening competition with regard to worker's compensation insurance in this state.

Sec. 2431. Section 2430 does not apply to group rated automobile insurance.

Sec. 2436. (1) A corporation, an association, a partnership, or an individual, whether located within or outside this state, may make application to the commissioner for a license as a rating organization to make rates and insurance contract forms for the kinds of insurance or subdivisions thereof, except for worker's compensation insurance, as are specified in its application and shall file with the application all of the following:

(a) A copy of its constitution, its articles of agreement or association, or its certificate of incorporation, and of its bylaws and rules governing the conduct of its business.

(b) A list of its members and subscribers.

(c) The name and address of a resident of this state upon whom notices or orders of the commissioner or process affecting the rating organization may be served.

(d) A statement of its qualifications as a rating organization.

(2) If the commissioner finds that the applicant is competent, trustworthy, and otherwise qualified to act as a rating organization and that its constitution, articles of agreement or association, or certificate of incorporation, and its bylaws and rules governing the conduct of its business conform to the requirements of law, he or she shall issue a license specifying the kinds of insurance or subdivisions thereof for which the applicant is authorized to act as a rating organization. Every application shall be granted or denied in whole or in part by the commissioner within 60 days of the date of its filing with the commissioner.

(3) The fee for the license shall be $25.00 which shall be in lieu of all other fees, licenses, or taxes imposed by the state or any political subdivision of the state.

(4) Licenses issued pursuant to this section shall remain in force for 3 years from date of issuance unless suspended or revoked by the commissioner, after hearing upon notice, pursuant to section 2478, in the event the rating organization ceases to meet the requirements of this section.

(5) Every rating organization shall notify the commissioner promptly of every change in any of the following:

(a) Its constitution, its articles of agreement or association, or its certificate of incorporation, and its bylaws and rules governing the conduct of its business.

(b) Its list of members and subscribers.

(c) The name and address of the resident of this state designated by it upon whom notices or orders of the commissioner or process affecting the rating organization may be served.

Sec. 2475. The policy forms and statistical plans for worker's compensation insurance in effect on January 1, 1983 may continue to be used until changed pursuant to the requirements of this act.

Section 2. This amendatory act shall take effect January 1, 1983.

This act is ordered to take immediate effect.

Thomas J. Husband

Clerk of the House of Representatives.

William C. Fowler

Secretary of the Senate.

Approved .....

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Governor.

Act No. 204
Public Acts of 1981
Approved by Governor
DEC 30 1981

STATE OF MICHIGAN
81ST LEGISLATURE
REGULAR SESSION OF 1981

Introduced by Reps. Emerson, Ciaramitaro, Mary C. Brown, Maynard, Watkins, Elliott, Koivisto, McNeely, Conroy, Virgil C. Smith, Bennett, Fitzpatrick, Stabenow, Hertel, Bullard, Jondahl, Hunter, Joe Young, Jr., Spaniola, Harrington, Terrell, Otterbacher, Vanek, Leland, Bennane, Scott, Mathieu, Keith and Alley
Rep. McCollough named co-sponsor

ENROLLED HOUSE BILL No. 5036

AN ACT to amend section 2403 of Act No. 218 of the Public Acts of 1956, entitled as amended "An act to revise, consolidate, and classify the laws relating to the insurance and surety business; to regulate the incorporation or formation of domestic insurance and surety companies and associations and the admission of foreign and alien companies and associations; to provide their rights, powers, and immunities and to prescribe the conditions on which companies and associations organized, existing, or authorized under this act may exercise their powers; to provide the rights, powers, and immunities and to prescribe the conditions on which other persons, firms, corporations, and associations engaged in an insurance or surety business may exercise their powers; to provide for the imposition of a privilege fee on domestic insurance companies and associations and the state accident fund; to provide for the imposition of a tax on the business of foreign and alien companies and associations; to provide for the imposition of a tax on the business of surplus line agents; to modify tort liability arising out of certain accidents; to provide for limited actions with respect to that modified tort liability, and to prescribe certain procedures for maintaining those actions; to require security for losses arising out of certain accidents; to provide for the continued availability and affordability of automobile insurance and homeowners insurance in this state, and to facilitate the purchase of that insurance by all residents of this state at fair and reasonable rates; to provide for certain reporting with respect to insurance, and to prescribe duties for certain state departments and officers with respect to that reporting; to establish and continue a nonprofit malpractice insurance fund to provide malpractice insurance to health providers; to modify and clarify the status, rights, powers, duties, and operations of the nonprofit malpractice insurance fund; to provide for the departmental supervision and regulation of the insurance and surety business within this state; to provide for the conservation, rehabilitation, or liquidation of unsound or insolvent insurers; to provide for the protection of policyholders and claimants of unsound or insolvent insurers; and to provide penalties for the violation of this act," as amended by Act No. 145 of the Public Acts of 1979, being section 500.2403 of the Compiled Laws of 1970.

The People of the State of Michigan enact:

Section 1. Section 2403 of Act No. 218 of the Public Acts of 1956, as amended by Act No. 145 of the Public Acts of 1979, being section 500.2403 of the Compiled Laws of 1970, is amended to read as follows:

Sec. 2403. (1) All rates shall be made in accordance with this section and all of the following:

(a) Due consideration shall be given to past and prospective loss experience within and outside this state; to catastrophe hazards; to a reasonable margin for profit and contingencies; to dividends, savings, or unabsorbed premium deposits allowed or returned by insurers to their policyholders, members, or subscribers; to past and prospective expenses, both countrywide and those specially applicable to this state; to underwriting practice, judgment, and to all other relevant factors within and outside this state. In determining the reasonableness of profit, due consideration shall be given to all investment income attributable to premiums, including income from unearned premium and loss reserves.

(b) The systems of expense provisions included in the rates for use by any insurer or group of insurers may differ from those of other insurers or groups of insurers to reflect the requirements of the operating methods of the insurer or group with respect to any kind of insurance, or with respect to any subdivision or combination thereof for which subdivision or combination separate expense provisions are applicable.

(c) Risks may be grouped by classifications for the establishment of rates and minimum premiums. Classification rates may be modified to produce rates for individual risks in accordance with rating plans which measure variations in hazards, expense provisions, or both. The rating plans may measure any differences among risks that may have a probable effect upon losses or expenses as provided for in subdivision (a).

(d) Rates shall not be excessive, inadequate, or unfairly discriminatory. A rate shall not be held to be excessive unless the rate is unreasonably high for the insurance coverage provided and a reasonable degree of competition does not exist with respect to the classification, kind, or type of risks to which the rate is applicable. A rate shall not be held to be inadequate unless the rate is unreasonably low for the insurance coverage provided and the continued use of the rate endangers the solvency of the insurer; or unless the rate is unreasonably low for the insurance provided and the use of the rate has or will have the effect of destroying competition among insurers, creating a monopoly, or causing a kind of insurance to be unavailable to a significant number of applicants who are in good faith entitled to procure the insurance through ordinary methods. A rate for a coverage is unfairly discriminatory in relation to another rate for the same coverage, if the differential between the rates is not reasonably justified by differences in losses, expenses, or both, or by differences in the uncertainty of loss for the individuals or risks to which the rates apply. A reasonable justification shall be supported by a reasonable classification system; by sound actuarial principles when applicable; and by actual and credible loss and expense statistics or, in the case of new coverages and classifications, by reasonably anticipated loss and expense experience. A rate is not unfairly discriminatory because the rate reflects differences in expenses for individuals or risks with similar anticipated losses, or because the rate reflects differences in losses for individuals or risks with similar expenses. Rates are not unfairly discriminatory if they are averaged broadly among persons insured on a group, franchise, blanket policy, or similar basis.

(2) Except to the extent necessary to meet the provisions of subsection (1)(d), uniformity among insurers in any matters within the scope of this section is neither required nor prohibited.

(3) (a) No rate filing by a rating organization licensed under section 2436 to file rates for worker's compensation insurance shall be effective after December 31, 1951 unless the overall manual rate level is reduced at least 20% from the overall manual rate level effective in calendar year 1951. Such reduction shall reflect favorable experience under the current rates, the rate effect of law amendments adopted in Act No. 357 of the Public Acts of 1950, being sections 418.131 to 418.559 of the Michigan Compiled Laws, and the consideration of investment income attributable to worker's compensation insurance premiums. If no rate filing is effective after December 31, 1951, the insurance commissioner shall immediately promulgate rates whose overall manual rate level is reduced at least 20% from the overall manual rate level effective in calendar year 1951. The commissioner's determination shall consider any proposed rates filed for 1952 by a rating organization licensed under section 2436 to file rates for worker's compensation insurance and adjust those rates to comply with this subsection. Said determination shall not require notice or a hearing prior to its effective date.

(b) As used in this subsection, "overall manual rate level" means the projected total amount of money to be generated by the application of manual rates per $100.00 of payroll on file with the insurance commissioner, exclusive of any rating system adjustments including, but not limited to, minimum premiums, loss constants, experience or retrospective rating plans, or dividend plans.

(c) This subsection shall expire January 1, 1954.

(4) No insurer licensed to write worker's compensation insurance in this state shall use a rate for worker's compensation insurance higher than the rate developed pursuant to subsection (3) on any policy issued or renewed by an insurer or its agents after December 31, 1951. This subsection shall expire January 1, 1954.

This act is ordered to take immediate effect.

Thomas D. Kirkland

Clerk of the House of Representatives.

William C. Vandenberg

Secretary of the Senate.

Approved .....

.....

Governor.

STATE OF MICHIGAN

81ST LEGISLATURE

REGULAR SESSION OF 1982

Introduced by Reps. Mary C. Brown, Hadden, Thomas H. Brown, Fitzpatrick, Maynard, Ciaramitaro, Harrington, Gilmer, Cruce, Fessler, Griffin, Emerson, Elliott, Van Singel, Hillegonds, Andrews, Henry, Randall, Ballantine, Giese, Brotherton, Binsfeld, Welborn, Skrel, Mueller, Hayes, Armbruster, Johnson, Strand, Dutko, Buth, Muxlow, Nick Smith, Defebaugh, Bryant, Ryan, Kirksey, Lincoln and Nash

ENROLLED HOUSE BILL No. 5176

AN ACT to amend sections 2400, 2401, 2408, and 2474 of Act No. 218 of the Public Acts of 1956, entitled as amended "An act to revise, consolidate, and classify the laws relating to the insurance and surety business; to regulate the incorporation or formation of domestic insurance and surety companies and associations and the admission of foreign and alien companies and associations; to provide their rights, powers, and immunities and to prescribe the conditions on which companies and associations organized, existing, or authorized under this act may exercise their powers; to provide the rights, powers, and immunities and to prescribe the conditions on which other persons, firms, corporations, and associations engaged in an insurance or surety business may exercise their powers; to provide for the imposition of a privilege fee on domestic insurance companies and associations and the state accident fund; to provide for the imposition of a tax on the business of foreign and alien companies and associations; to provide for the imposition of a tax on the business of surplus line agents; to modify tort liability arising out of certain accidents; to provide for limited actions with respect to that modified tort liability, and to prescribe certain procedures for maintaining those actions; to require security for losses arising out of certain accidents; to provide for the continued availability and affordability of automobile insurance and homeowners insurance in this state, and to facilitate the purchase of that insurance by all residents of this state at fair and reasonable rates; to provide for certain reporting with respect to insurance, and to prescribe duties for certain state departments and officers with respect to that reporting; to establish and continue a nonprofit malpractice insurance fund to provide malpractice insurance to health providers; to modify and clarify the status, rights, powers, duties, and operations of the nonprofit malpractice insurance fund; to provide for the departmental supervision and regulation of the insurance and surety business within this state; to provide for the conservation, rehabilitation, or liquidation of unsound or insolvent insurers; to provide for the protection of policyholders and claimants of unsound or insolvent insurers; and to provide penalties for the violation of this act," being sections 500.2400, 500.2401, 500.2408, and 500.2474 of the Compiled Laws of 1970; and to add sections 2301, 2303, 2310, 2312, 2318, 2320, 2322, 2350, 2409, 2409a, and 2411.

The People of the State of Michigan enact:

Section 1. Sections 2400, 2401, 2408, and 2474 of Act No. 218 of the Public Acts of 1956, being sections 500.2400, 500.2401, 500.2408, and 500.2474 of the Compiled Laws of 1970, are amended and sections 2301, 2303, 2310, 2312, 2318, 2320, 2322, 2350, 2409, 2409a, and 2411 are added to read as follows:

CHAPTER 23
WORKER'S COMPENSATION INSURANCE RATES

Sec. 2301. The state accident fund and every insurer authorized to write worker's compensation insurance in this state shall participate in the Michigan worker's compensation placement facility for the purpose of doing all of the following:

(a) Providing worker's compensation insurance to any person who is unable to procure the insurance through ordinary methods.

(b) Preserving to the public the benefits of price competition by encouraging maximum use of the normal private insurance system.

Sec. 2303. As used in this chapter:

(a) "Facility" means the Michigan worker's compensation placement facility created under this chapter.

(b) "Participating member" means an insurer or the state accident fund created pursuant to Act No. 317 of the Public Acts of 1969, as amended, being sections 418.101 to 418.941 of the Michigan Compiled Laws, who is a member of the facility and who in any given calendar year has a participation ratio greater than zero in the facility for that year.

(c) "Participation ratio" means the ratio of the participating member's voluntary Michigan worker's compensation premiums to the comparable statewide totals of all participating members.

(d) "Worker's compensation insurance" means insurance which provides any of the following:

(*i*) Security required pursuant to Act No. 317 of the Public Acts of 1969, as amended, being sections 418.101 to 418.941 of the Michigan Compiled Laws.

(*ii*) Security required pursuant to the United States longshoreman's and harbor worker's compensation act.

(*iii*) Coverage customarily known as employer's liability insurance, when contained in or endorsed to a policy providing the security in subparagraph (*i*) or (*ii*).

Sec. 2310. The facility shall operate subject to the supervision of a board of governors appointed by the commissioner. The members of the board of governors shall serve for terms of 2 years. The board shall consist of 5 participating members, 2 worker's compensation insurance policyholders, 1 licensed agent, and 1 member representing the general public.

Sec. 2312. (1) A plan of operation of the facility shall be prepared by the board of governors and shall be subject to the approval of the commissioner. The commissioner shall review the plan of operation on an ongoing basis, and the plan shall be subject to revision at the request of the commissioner at any time.

(2) The plan of operation shall provide for all of the following:

(a) Appointment by the board of governors of 1 or more servicing carriers, subject to the approval of the commissioner. Appointments may be rescinded for cause by either the board subject to the approval of the commissioner, or by the commissioner.

(b) Creation of servicing carrier performance standards including all of the following:

(*i*) Sufficient personnel to provide support for safety management services offered by the plan.

(*ii*) Providing for sufficient personnel for claims adjustment.

(c) Agreements among the state accident fund and all insurers authorized to write worker's compensation insurance in this state with respect to the equitable apportionment among them of worker's compensation insurance which may be afforded applicants who are in good faith entitled to, but who are unable to procure such insurance through ordinary methods.

(d) Payment of commissions to producing agents not to exceed 5% of a total premium.

(e) Creation of 3 rating plans as follows:

(*i*) Rating plan "A" which shall provide coverage for insureds who have a demonstrated accident frequency problem, who have a measurably adverse loss ratio over a period of years, or who have demonstrated an attitude of noncompliance with safety requirements. This plan shall contain a system of surcharges established by the board of governors and approved by the commissioner.

(*ii*) Rating plan "B" which shall provide coverage to those employers who apply for worker's compensation insurance in the facility and are either self-insured or a member of a self-insurance group. This plan shall be established by the board of governors of the facility and approved by the commissioner. The

commissioner shall convene and consult with an advisory organization including representatives of self-insureds and group self-insureds prior to approving rating plan "B". The recommendations of the advisory organization shall be given reasonable consideration by the commissioner.

(*iii*) Rating plan "C" which shall provide coverage to all other insureds of the facility. Rating plan "C" shall not contain any surcharge system.

(f) Prompt and fair hearings for purposes of section 2350.

(3) The application of the plans created under subsection (2)(e) to insureds shall be as determined by the commissioner. The plans shall be applied to insureds regardless of the number of employees or amount of payroll of the insured.

(4) Retrospective evaluation of premiums and loss and expense experience of insureds within each rating plan under subsection (2)(e) shall be performed by the board of governors, in a manner approved by the commissioner. If this evaluation indicates that a return of a portion of premiums is in order, then such a return shall be accomplished, subject to the approval of the commissioner.

Sec. 2318. (1) The classification and rating systems of the facility shall be determined by the designated advisory organization, subject to the requirements of this chapter and the approval of the commissioner.

(2) Every participating member designated to act on behalf of the facility shall be authorized to use the classification and rating systems of the facility on business placed through the facility and shall not use other rates for worker's compensation insurance placed through the facility.

Sec. 2320. The f ity shall provide for deferred premium payment plans which shall include sufficient advance payments at least equal to the pro rata earned premium at all times.

Sec. 2322. Every agent who is authorized to solicit, negotiate, or effect worker's compensation insurance on behalf of the facility or on behalf of any participating member shall:

(a) Offer to place worker's compensation insurance through the facility for any applicant requesting the agent to do so.

(b) Be entitled to receive, and any participating member be entitled to pay, a commission for placing insurance through the facility at the uniform rates of commission as provided in the plan of operation.

Sec. 2350. (1) Any participating member, applicant, person, or business insured under a policy placed through the facility may request a formal hearing and ruling by the board of governors of the facility on any of the following:

(a) An alleged violation of the plan of operation.

(b) Any alleged improper act or ruling of the facility affecting an assessment, premium, or coverage furnished.

(2) Any formal ruling of the board of governors of the facility may be appealed to the commissioner by filing notice of appeal with the facility and the commissioner within 30 days after receipt of the written ruling.

(3) The commissioner shall issue an order either upholding the board of governors' ruling or reversing its ruling.

Sec. 2400. (1) Except with respect to worker's compensation insurance, the purpose of this chapter is to promote the public welfare by regulating insurance rates to the end that they shall not be excessive, inadequate, or unfairly discriminatory, and to authorize and regulate cooperative action among insurers in rate-making and in other matters within the scope of the insurance code. Nothing in this chapter is intended (1) to prohibit or discourage reasonable competition, or (2) to prohibit, or encourage except to the extent necessary to accomplish the aforementioned purpose, uniformity in insurance rates, rating systems, rating plans, or practices.

(2) With respect to worker's compensation insurance, the purposes of this chapter are:

(a) To protect policyholders and the public against the adverse effects of excessive, inadequate, or unfairly discriminatory rates.

(b) To promote price competition among insurers writing worker's compensation insurance so as to encourage rates which will result in the lowest possible rates consistent with the benefits established in the worker's disability compensation act of 1969, Act No. 317 of the Public Acts of 1969, as amended, being sections 418.101 to 418.941 of the Michigan Compiled Laws, and with maintaining the solvency of insurers.

(c) To provide regulatory controls and other activity in the absence of competition.

(d) To improve the availability, fairness, and reliability of worker's compensation insurance.

(3) This chapter shall be liberally interpreted to carry into effect the provisions of this section.

Sec. 2401. (1) Except as provided in subsection (2), this chapter applies to the following kinds of insurance or coverages on risks or operations in this state:

(a) Casualty insurance, as defined in section 624, except as to livestock insurance.

(b) Surety and fidelity.

(c) Automobile insurance, as defined or included under the following sections:

(*i*) 624 (general definition of casualty insurance).

(*ii*) 7202 (insuring powers of reciprocal insurers).

(*iii*) 620 (automobile insurance (limited) defined).

(*iv*) 614 (marine insurance defined).

(d) Worker's compensation insurance, as defined or included under the following sections:

(*i*) 624 (general definition of casualty insurance).

(*ii*) 7202 (insuring powers of reciprocal insurers).

(e) To all insurance transacted by a reciprocal insurer pursuant to section 7202 (insuring powers of reciprocal insurers).

(f) Personal property floaters.

(g) Title insurance.

(2) This chapter shall not apply to:

(a) Reinsurance, other than joint reinsurance to the extent stated in section 2464.

(b) Disability insurance.

(c) Insurance against loss of or damage to aircraft or against liability, other than worker's compensation and employers' liability, arising out of the ownership, maintenance, or use of aircraft.

(3) This chapter shall apply to all classes of insurers admitted to do business in this state, including stock, mutual, reciprocal, and interinsurers authorized to write any of the kinds of insurance to which this chapter applies under this act.

(4) If any kind of insurance, subdivision, or combination thereof, or type of coverage, subject to this chapter, is also subject to regulation by another rate regulatory chapter of this act, an insurer to which both chapter 24 and chapter 26 are otherwise applicable shall file with the commissioner, a designation as to which rate regulatory chapter shall be applicable to the insurer with respect to such kind of insurance, subdivision, or combination thereof, or type of coverage.

Sec. 2408. (1) The commissioner shall review filings as soon as reasonably possible after they have been made in order to determine whether the filings meet the requirements of this chapter.

(2) Subject to the exception specified in subsection (3), each filing whether or not accompanied by supporting information shall be on file for a waiting period of 15 days before it becomes effective, which period may be extended by the commissioner for 1 additional period not to exceed 15 days if the commissioner gives written notice within the waiting period to the insurer or rating organization which made the filing that he or she needs additional time for the consideration of the filing. Upon written application by the insurer or rating organization, the commissioner may authorize a filing which he or she has reviewed to become effective before expiration of the waiting period or any extension thereof. A filing whether or not accompanied by supporting information shall be considered to meet the requirements of this chapter unless disapproved by the commissioner within the waiting period or extension thereof. Except, if a filing is not accompanied by supporting information and the information is required by the commissioner under section 2406(1), the filing shall be considered to meet the requirements of this chapter unless disapproved by the commissioner within 15 days after the information is furnished.

(3) Any special filing with respect to a surety or guaranty bond required by law, or by court or executive order, or by order, rule, or regulation of a public body, not covered by a previous filing, shall become effective when filed and shall be considered to meet the requirements of this chapter until such time as the commissioner reviews the filing and so long thereafter as the filing remains in effect.

(4) This section shall not apply to worker's compensation insurance filings made pursuant to section 2406(3), (4), and (5).

Sec. 2409. (1) The commissioner shall hold a public hearing and shall issue a tentative report detailing the state of competition in the worker's compensation insurance market on a statewide basis and delineating specific classifications, kinds or types of insurance, if any, where competition does not exist not later than January 15, 1981 and each year thereafter. The report shall be based on relevant economic tests, including but not limited to those in subsection (3). The findings in the report shall not be based on any single

measure of competition, but appropriate weight shall be given to all measures of competition. The report shall include a certification of whether or not competition exists. Any person who disagrees with the report and findings of the commissioner may request a contested hearing pursuant to Act No. 306 of the Public Acts of 1969, as amended, being sections 24.201 to 24.315 of the Michigan Compiled Laws, not later than 60 days after issuance of the tentative report.

(2) Not later than August 1, 1984 and each year thereafter, the commissioner shall issue a final report which shall include a final certification of whether or not competition exists in the worker's compensation insurance market. The final report and certification shall be supported by substantial evidence.

(3) All of the following shall be considered by the commissioner for purposes of subsections (1) and (2):

(a) The extent to which any insurer controls the worker's compensation insurance market, or any portion thereof. With respect to competition on a statewide basis, an insurer shall not be considered to control the worker's compensation insurance market unless it has more than a 15% market share. This subdivision shall not apply to the state accident fund.

(b) Whether the total number of companies writing worker's compensation insurance in this state is sufficient to provide multiple options to employers.

(c) The disparity among worker's compensation insurance rates and classifications to the extent that such classifications result in rate differentials.

(d) The availability of worker's compensation insurance to employers in all geographic areas and all types of business.

(e) The residual market share.

(f) The overall rate level which is not excessive, inadequate, or unfairly discriminatory.

(g) Any other factors the commissioner considers relevant.

(4) The reports and certifications required under subsections (1) and (2) shall be forwarded to the governor, the clerk of the house, the secretary of the senate, all the members of the house of representatives committees on insurance and labor, and all the members of the senate committees on commerce and labor and retirement.

(5) Not later than 90 days after receipt of the final report and final certification, the legislature, by concurrent resolution, shall approve or disapprove the certification by a majority roll-call vote in each house. If the certification is approved, the commissioner shall proceed under section 2409a.

Sec. 2409a. If the commissioner certifies and the legislature resolves pursuant to section 2409 that a reasonable degree of competition does not exist with respect to the worker's compensation insurance market on a statewide basis or any geographic areas, classifications, kinds or types of risk, or that insurance is unavailable to a segment of the market who are, in good faith, entitled to obtain insurance through ordinary means, the commissioner shall create competition or availability where it does not exist. A plan for competition or availability adopted pursuant to this section shall be included in a final certification of noncompetition under section 2409. The plan shall only relate to those geographic areas, classifications, or kinds or types of risks where competition has been certified not to exist. The plan may include such methods designed to create competition or availability as the commissioner considers necessary, and may provide for the commissioner to do 1 or more of the following:

(a) Order the state accident fund created pursuant to Act No. 317 of the Public Acts of 1969, as amended, being sections 418.101 to 418.941 of the Michigan Compiled Laws, to develop, subject to the commissioner's approval, mechanisms to create competition or availability where it does not exist. In developing these mechanisms, the state accident fund may set cost transfers or engage in other activity to stimulate competition or availability. If a plan is not submitted to the commissioner within 30 days after the date of the commissioner's order, or if the plan does not meet the approval of the commissioner, the commissioner shall develop such a plan and order its implementation by the state accident fund. The plan established by the commissioner shall continue in force until superseded by a plan established by the state accident fund and approved by the commissioner.

(b) Authorize, by order, joint underwriting activities in a manner specified in the commissioner's order.

(c) Modify the rate approval process in a manner to increase competition or availability while at the same time providing for reasonably timely rate approvals, including prior approval or file and use processes.

(d) Order excess profits regulation. Excess profits regulation authorized by this subdivision shall be based upon rules promulgated pursuant to Act No. 306 of the Public Acts of 1969, as amended. Excess profits shall include both underwriting profits and all after-tax investment or investment profit or loss from unearned premiums and loss reserves attributable to worker's compensation insurance. The commissioner, pursuant to excess profits regulation, may establish forms for the reporting of financial data of insurer.

(e) Establish and require worker's compensation insurance rates, by order, which insurers must use as a condition of maintaining their certificate of authority. The order setting the rates shall take effect not less than 90 days nor more than 150 days after the order is issued.

Sec. 2411. (1) Rates and rating systems used by any insurer with regard to worker's compensation insurance within this state shall conform to the applicable requirements of this section.

(2) Classifications used by an insurer shall be based upon 1 or more of the following:

(a) The industry group to which an employer belongs.

(b) Similarity of expected losses as reflected by similarities in pure premium and similarities in operations of employers insured.

(c) Similarity of risk of compensable injury as reflected by the type of work performed by employees.

(d) Other factors that would encourage innovation and would encourage insurers to minimize the risk of loss from hazards insured against and would be consistent with both the statistical plan approved by the commissioner and the purposes of this chapter.

(3) Each insurer shall establish a merit rating plan for worker's compensation insurance whereby an insured's premium is modified either prospectively or retrospectively. The plans required under this subsection shall provide for premium surcharges or credits based upon loss experience within a specified period or other factors which are reasonably related to risk of loss. The plan shall provide for sufficient premium differentials so as to encourage safety and adequately reward employers without a claim during the merit rating period. The sensitivity of a rating system may vary by size of the risk involved.

(4) The single enterprise rule or similar rule requiring a worker's compensation insured to be classified according to the entire business in which the insured is engaged shall not be used. Upon request of an insured, an insurer shall classify employees in separate operations of a business in different classifications consistent with the insurers' rate system filing if payroll information is supplied to the insurer for each operation requested to be in a separate classification.

Sec. 2474. A person or organization shall not wilfully withhold information from, or knowingly give false or misleading information to, the commissioner, any statistical agency designated by the commissioner, any rating organization, any data collection agency, or any insurer, which will affect the rates or premiums chargeable under this chapter. A violation of this section shall subject the person or organization guilty of the violation to the penalties provided in section 2478.

Section 2. This amendatory act shall take effect January 1, 1983.

This act is ordered to take immediate effect.

Thomas J. Husband

Clerk of the House of Representatives.

William C. Fowler

Secretary of the Senate.

Approved .....

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Governor.